



**WEST AFRICA
COMPETITIVENESS PROGRAMME
REGIONAL INVESTMENT PROFILE**

MANGO VALUE CHAIN



Funded by
the European Union

Implemented by:





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March 2022

ACKNOWLEDGEMENTS

This investment profile has been prepared under the framework of the West Africa Competitiveness Programme (WACOMP) which is funded by the European Union. WACOMP is implemented by the International Trade Centre and the United Nations Industrial Development Organization (UNIDO) in collaboration with the Commission of the Economic Community of West Africa (ECOWAS). WACOMP covers all ECOWAS member States plus Mauritania. WACOMP focuses on four selected value chains, namely mango, textile/garments, information and communication technology and cassava. It aims to strengthen the competitiveness of West African Countries and enhance their integration into the regional and international trading system, through an enhanced level of production, transformation and export capacities of the private sectors in line with the regional and national industrial and SME strategies.



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Table of Contents

FOREWORD	5
1. ECONOMIC COMMUNITY OF WEST AFRICAN STATES (ECOWAS) AS AN INVESTMENT DESTINATION	7
1.1. INTRODUCTION: REGIONAL INTEGRATION IN AFRICA AND ECOWAS	7
1.2. ECOWAS: A PEACEFUL, SECURE AND STABLE REGION	9
1.3. INSTITUTIONAL DEVELOPMENT	10
1.4. EASE OF DOING BUSINESS	12
1.5. INFRASTRUCTURE (HARD AND SOFT)	14
1.6. ECOWAS ECONOMIC PERFORMANCE	15
1.7. TRADE AND FOREIGN MARKET ACCESS	17
1.8. FDI IN ECOWAS: INFLOWS AND INCENTIVES	20
1.9. STRUCTURAL REFORMS ACHIEVED/PLANNED	21
1.10.	CONCLUSION 24
2. MANGO SECTOR IN ECOWAS REGION	25
2.1. ECOWAS MANGO SECTOR IN A GROWING GLOBAL MARKET	25
Spread of production and export in ECOWAS	25
ECOWAS production and export trends in the world market	27
2.2. STRATEGIC ACTIVITIES AND SUBSECTORS FOR INVESTMENT	33
Export of fresh mango: Keys to success	33
Mango puree and juice	35
Dried mango	37
Organic and Fairtrade mango	39
2.3. KEY POINTS FOR SUCCESSFUL INVESTMENT	42
Diversify procurement and markets	42
Invest in quality	43
2.4. REGIONAL INVESTMENT OPPORTUNITIES	47
3. COUNTRY PROFILES OF THE FIVE MAIN MANGO-EXPORTING COUNTRIES IN ECOWAS	48
3.1. CÔTE D'IVOIRE	48
Country overview	48
Investing and doing business in Cote d'Ivoire	50
Mango in Côte d'Ivoire: An overview	52
Mango value chain and stakeholders	55
Investing in Mango in Côte d'Ivoire: Key figures	57
Investment opportunities in Côte d'Ivoire's mango sector	58
Investment and mango sector support structures and programmes	58
SWOT of Côte d'Ivoire's mango sector	60

3.2. SENEGAL	61
Country overview	61
Investing and doing business in Senegal	62
Mango in Senegal: An overview	64
Mango value chain and stakeholders	67
Investing in Mango in Senegal: Key figures	70
Investment opportunities in Senegal's mango sector	71
Investment and mango sector support structure and programmes	71
SWOT of Senegal's mango sector	73
3.3. MALI	74
Country overview	74
Mali standing in the african and global scontexts	75
Investing and doing business in Mali	75
Mango in Mali: An overview	77
Mango value chain and stakeholders	80
Investing in mango in Mali: Key figures	82
Investment opportunities in Mali's mango sector	83
Investment and mango sector support structures and programmes	83
SWOT of Mali's mango sector	87
3.4. BURKINA FASO	89
Country overview	89
Investing and doing business in Burkina Faso	90
Mango in Burkina Faso: An overview	93
Mango value chain and stakeholders	95
Investing in Mango in Burkina Faso: Key figures	97
Investment opportunities in Burkina Faso's mango sector	98
Investment and mango sector support structure and programmes	99
SWOT of Burkina Faso's mango sector	100
3.5. GHANA	101
Country overview	101
Investing and doing business in Ghana	103
Mango in Ghana: an overview	106
Mango value chain and stakeholders	108
Investing in Mango in Ghana: Key figures	111
Investment opportunities in Ghana's mango sector	112
Investment and mango sector support structure and programmes	113
SWOT of Ghana's mango sector	115
ANNEX	116
ANNEX 1: LIST AND CONTACT DETAILS OF MAJOR STAKEHOLDERS IN THE MANGO SECTOR	116

List of Figures

Figure 1:	ECOWAS member states	8
Figure 2:	Real GDP growth of the fastest-growing African economies (2010–19)	15
Figure 3:	Export and import growth (%) in ECOWAS and other RECs (2010–18)	17
Figure 4:	Commodity exports composition of West African countries (USD billion, 2018)	17
Figure 5:	Services trade composition of ECOWAS (2018)	18
Figure 6:	FDI total stock in ECOWAS and other African RECs (USD billion, 2019)	20
Figure 7:	Daily exchange rates of selected West African currencies against the USD (365 days)	22
Figure 8:	Mango production region in ECOWAS and Mauritania	25
Figure 9:	Average annual rainfall in West Africa	26
Figure 10:	Estimated mango production in West Africa (in thousands of tons)	26
Figure 11:	Estimated destination and uses of ECOWAS mango production (average in 2019–20)	27
Figure 12:	Share of world mango production by main producing countries	27
Figure 13:	Share of world mango trade by main exporters	28
Figure 14:	International mango trade	29
Figure 15:	World mango trade and market share of ECOWAS among main exporting countries	29
Figure 16:	Evolution of global and ECOWAS mango export values	30
Figure 17:	Comparison of fresh and dry mango prices (CIF, USA)	30
Figure 18:	Worldwide mapping of mango production calendar	31
Figure 19:	Monthly supply and demand of mango in the EU market	32
Figure 20:	Shares of fresh exports among mango uses in main exporting countries	33
Figure 21:	Share of mango juice and puree among mango uses in main exporting countries	35
Figure 22:	Share of dried mango among mango uses in main exporting countries	37
Figure 23:	Evolution of US imports of dried mangoes	37
Figure 24:	Evolution of organic markets in Europe	39
Figure 25:	Total certified organic and organic mango acreages in some ECOWAS countries	40
Figure 26:	Diversification strategies in the mango value chain	42
Figure 27:	National standard for mango trading and processing in ECOWAS countries	43
Figure 28:	Mango production by region in Côte d'Ivoire	52
Figure 29:	Production outlets and quantity of exported mango from Côte d'Ivoire (in tons)	53
Figure 30:	Evolution of Ivorian mango exports by product in 2011–20	54
Figure 31:	SWOT of Côte d'Ivoire's mango sector	60
Figure 32:	Mango production by region in Senegal	64
Figure 33:	Production outlet and quantity of exported mango from Senegal (in tons)	65
Figure 34:	Evolution of Senegalese mango exports by product in 2011–20	66
Figure 35:	Mango production in Mali by region	77
Figure 36:	Production outlet and quantity of exported mango from Mali (in tons)	78
Figure 37:	Evolution of Malian mango exports (2011–20) (in tons)	79
Figure 38:	SWOT of Mali's mango sector	87
Figure 39:	Mango production by region in Burkina Faso	93
Figure 40:	Production outlet and quantity of exported mango from Burkina Faso (in tons)	94
Figure 41:	Evolution of Burkinabè mango exports by product in 2011–20 (in tons)	94
Figure 42:	SWOT of Burkina Faso's mango sector	100
Figure 43:	Mango production by region in Ghana	106
Figure 44:	Production outlet and quantity of exported mango from Ghana (in tons)	107
Figure 45:	Evolution of Ghanaian mango exports by product in 2011–20 (in tons)	108
Figure 46:	SWOT of Ghana's mango sector	114

List of Tables

Table 1:	Extent of economic integration in the eight major African RECs	7
Table 2:	ECOWAS in the context of some of the major African RECs	8
Table 3:	Institutional quality in ECOWAS and other major African RECs	11
Table 4:	Doing business in ECOWAS and other major African RECs	13
Table 5:	Infrastructure quality in ECOWAS and other major African RECs	14
Table 6:	Economic performance in ECOWAS and other major African RECs	16
Table 7:	Comparative advantages of ECOWAS member countries (2018)	18
Table 8:	Mango sector: Summary of quality requirements, standards and technical regulations	45
Table 9:	Production and export calendar in Côte d'Ivoire	53
Table 10:	Investment and mango sector support in Côte d'Ivoire	58
Table 11:	Production and export calendar in Senegal	65
Table 12:	Investment and mango sector support in Senegal	72
Table 13:	Production and export calendar in Mali	76
Table 14:	Production and export calendar in Burkina Faso	94
Table 15:	Investment and mango sector support in Burkina Faso	99
Table 16:	Production and export calendar in Ghana	106
Table 17:	Investment and mango sector support in Ghana	113

Abbreviations & Acronyms

ACP	African, Caribbean and Pacific Group of States	HACCP	Hazard Analysis and Critical Control Points
AGOA	African Growth and Opportunity Act	ICT	Information and communications technology
APEX	Agence pour la Promotion des Exportations	IFM	Interprofession Filière Mangué
CET	Common external tariff	IMF	International Monetary Fund
COMESA	Common Market for Eastern and Southern Africa	ISO	International Organization for Standardization
ECCAS	Economic Community of Central African States	ITFC	Integrated Tamale Fruit Company
ECOWAS	Economic Community of West African States	REC	Regional economic community
ETLS	ECOWAS Trade Liberalization Scheme	SADC	Southern African Development Community
EU	European Union	SEZ	Special economic zone
FDI	Foreign direct investment	SMEs	Small and medium-sized enterprises
FIRCA	Interprofessional Fund for Agricultural Research and Advisory Services	UNCTAD	United Nations Conference on Trade and Development
G&S	Goods and services	WACOMP	West African Competitiveness Programme
GDP	Gross domestic product	WAEMU	West African Economic and Monetary Union
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit		

ECOWAS COMMISSION



The regional investment profile on the mango value chain is being developed within the framework of the West Africa Competitiveness Programme (WACOMP) funded by the European Union and implemented by the United Nations Industrial Development Organisation (UNIDO) and the International Trade Centre (ITC) in Geneva.

The WACOMP programme aims to strengthen West Africa's economic competitiveness and develop various national and regional value chains, including cassava, mango, textiles and clothing, and information and communication technology, and to improve the business climate in the region.

This investment profile is a resource to be shared and a compendium of information presenting the region's potential in the mango value chain. It is designed to support the private sector in its search for new project ideas and facilitate investment decisions.

Its development is part of the implementation of the West African regional industrialisation policy, the EU investment policy and the ECOWAS trade policy.

With a production of more than 1700,000 tons of mangoes per year, the region is the largest mango producer on the continent and one of the largest mango producers in the world. Only less than 20% of the mangoes produced are nowadays processed, thus offering multiple opportunities for trade, investment and manufacturing of mango products.

West Africa's population now exceeds 397 million and the current supply of processed mango products is not yet sufficient to meet the market's needs. With the implementation of the African Continental Free Trade Area (AfCFTA), the aim is to satisfy an African market of more than 1.4 billion people.

The ECOWAS Commission welcomes the publication of this investment promotion tool for West Africa and would like to take this opportunity to thank its partners for their support and efforts in its design and production.

We wish future users of these profiles every success.

Mr. Mamadou TRAORE

Commissioner for Industry and Private Sector Promotion

EUROPEAN UNION DELEGATION TO NIGERIA AND ECOWAS



At the EU, we are delighted at the dynamic cooperation between us, the Regional Economic Communities (RECs) and the private sector across the region. The investment profile study is being supported by West Africa Competitiveness Programme (WACOMP). This is one of our flagship programmes implemented in West Africa. As a programme dedicated to improving the competitiveness of the region in several value chains, it becomes imperative to showcase the potentials of some of those developed value chains. In order to boost investment (local and international), create jobs especially for the youth in a world struggling and recovering from the COVID pandemic, there is no better time than now to promote the investment opportunities in West Africa/ECOWAS.

We are therefore, wholeheartedly in support of the publications of the ECOWAS Investment Profiles for Mango, Information and Communication Technology (ICT), Textile and Cassava. We note that, about 4% of global mango production takes place in West Africa and a substantial percentage of the produced mangoes are exported to Europe and other parts of the world. With improved production, processing and packaging practices the sector will enjoy tremendous growth.

Attracting investment and creating a business enabling environment is key to the successful diversification and development of the economies in the region and indeed the whole continent. This is also true for the mango, ICT, textile and cassava value chains. Investment facilitation is at the heart of the EU Global Gateway initiative which aims at the EU institutions and EU Member States jointly mobilising up to EUR 300 billion of investments in selected sectors. The EU is also partnering with Africa under the EU External Investment Plan (EIP). With this, the EU is committed to creating jobs, boosting economies and offering people a brighter future.

This report will provide investors relevant information about how to take advantage of opportunities across the value chains, from production to the market. By taking strategic investment opportunities, investors will be contributing to the economic development of the region.

I would like to thank the ITC and our other WACOMP partners for undertaking this very useful study of the investment profiles in 4 critical sectors (Mango, ICT, Textile and Cassava) that will boost and support investment in the public and private sectors, the governments and the people of West Africa.

Cecile TASSIN-PELZER

Head of Cooperation, European Union Delegation to Nigeria and ECOWAS



1. ECONOMIC COMMUNITY OF WEST AFRICAN STATES (ECOWAS) AS AN INVESTMENT DESTINATION

1.1. INTRODUCTION: REGIONAL INTEGRATION IN AFRICA AND ECOWAS

There is wide and longstanding recognition within African leadership that economic prospects in most African countries are limited by small national markets. Approximately one-third of African countries have a gross domestic product (GDP) of less than \$10 billion. Nearly half have a per capita income of less than \$1,200, and one-third have a landmass of less than 100,000 km². Accordingly, ever since independence in the 1960s, national leaders have consistently made efforts to secure regional integration, a grouping of national economies intended to create a liberalized single market through harmonized economic policies and the removal of tariff and non-tariff restrictions on trade within the corresponding bloc. The expectation is that this would allow member countries, especially smaller ones, access to scale efficiencies and to exploit any existing synergies among economies that would materialize into rapid economic transformation and growth and development.

The Economic Community of West African States (ECOWAS) was the first post-independence regional economic community (REC) to be established following the Treaty of Lagos on 28 May 1975 (with a Revised Treaty on 24 July 1993).¹ Other countries and regions followed suit, creating as many as 14 RECs. As a result of various initiatives to unite African countries into regional markets, the overlapping of African RECs offers a visual depiction of a 'spaghetti bowl'. Eight of these regional bodies constitute the building blocks of the African Economic Community established by the 1991 Abuja Treaty, the overarching framework for continental economic integration.²

One of the region's advantages is its geographical location, as it is at the crossroads of important routes linking Europe, the Americas and the rest of Africa. This relative proximity to some of the world economic epicentres undoubtedly makes the region a true hub, which makes trading with these parts of the world relatively less costly.

Table 1: Extent of economic integration in the eight major African RECs

Economic Community of West African States (ECOWAS)	Free trade area; customs unions; common currency in force for the West African Economic and Monetary Union (WAEMU) subset, in progress for the whole region
Common Market for Eastern and Southern Africa (COMESA)	Free trade area; customs union and currency union in progress
Economic Community of Central African States (ECCAS)	For the Economic and Monetary Community of Central Africa (CEMAC) subset: free trade area, customs unions and currency union
Southern African Development Community (SADC)	For the Southern African Customs Union (SACU) subset: free trade area and customs union; currency union in progress for the whole region
East African Community (EAC)	Free trade area; customs union and currency union in progress
Community of Sahel-Saharan States (CEN-SAD)	No free trade; no customs union; no currency union
Intergovernmental Authority on Development (IGAD)	No free trade; no customs union; no currency union

Source: United Nations Economic Commission for Africa (UNECA).

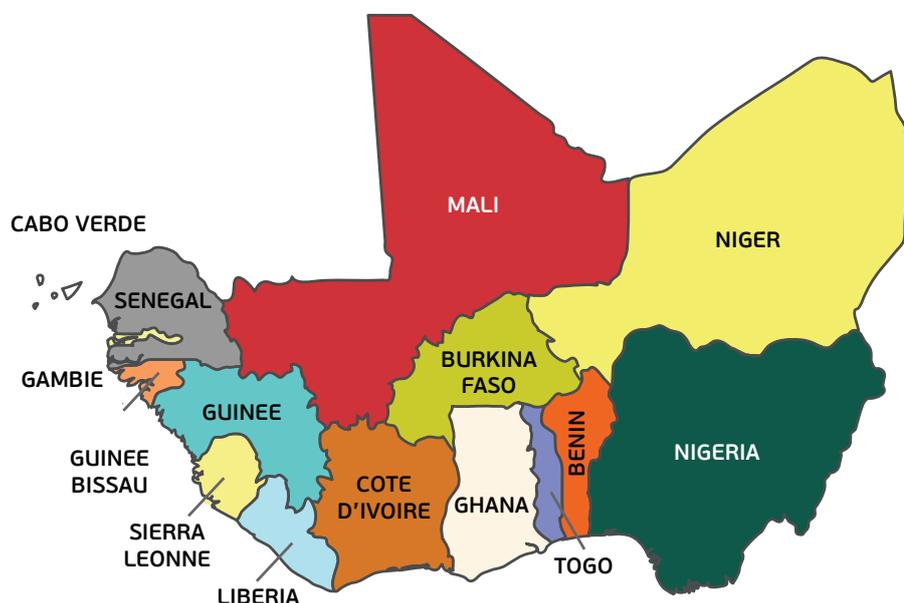
- 1 The signatories included all current 15 West African countries, except the Republic of Cabo Verde, which joined the following year. The Islamic Republic of Mauritania withdrew in 2000, but applied for a new associate membership in August 2017. The Kingdom of Morocco has also shown interest in joining the community since February 2017.
- 2 The remaining regional blocs are the Mano River Union (MRU) in Western Africa, the Indian Ocean Commission (IOC) in Southern Africa, the Economic Community of the Great Lakes Countries (CEPGL) in Central and Southern Africa, the Liptako-Gourma Authority (LGA) in Western Africa, the Greater Arab Free Trade Area (GAFTA) between North African and Middle Eastern states), and the Southern African Customs Union (SACU).

This uniquely favourable geographical position, combined with ever-improving living conditions and an increasingly attractive business environment, helps explain the 13.3% increase in international arrivals from tourism, both business and leisure, in 2015–18. The figure is more than twice the 5.7% average in the rest of Africa.

The region also enjoys a vast array of natural resources, ranging from the northern arid and semi-arid Saharan Desert and the Sahel to the

southern tropical monsoon and rainforest. It is estimated that the region hosts more than 29% of total proven oil reserves in Africa, and more than 36% of natural gas reserves.³ The resource portfolio also includes minerals such as diamonds, gold, uranium, platinum, copper, cobalt, iron, bauxite, silver, iron ore and phosphate. This largely untapped wealth provides vast opportunities for industrialization and economic development, in the face of ever-increasing world demand for such commodities.

Figure 1: ECOWAS member states



Source: Retrieved from ECOWAS.

Table 2: ECOWAS in the context of some of the major African RECs

	ECOWAS	AMU	COMESA	ECCAS	SADC
Establishment date	1975	1988	1994	1983	1980
Number of member countries	15	5	19	11	15
Landmass (million km ²)	5.1	5.8	12	6.5	10
Population (million)	386.9	102.5	553.8	198.5	353.1
Regional integration performance (United Nations Economic Commission for Africa, 0-1)	0.43	0.49	0.37	0.44	0.34
Trade integration	0.44	0.48	0.45	0.36	0.34
Productive integration	0.22	0.45	0.33	0.32	0.24
Macroeconomic integration	0.47	0.57	0.37	0.68	0.42
Infrastructure integration	0.30	0.51	0.32	0.37	0.21
Free movement of people	0.73	0.44	0.39	0.47	0.49

Source: Author's calculations, from World Bank and United Nations Economic Commission for Africa.

³ Source: <http://www.bp.com/statisticalreview>.

The drive towards a common regional market that would effectively provide the basis for greater economic efficiency has progressed along the following steps:

- i. The free movement of goods and services through the removal of tariff and non-tariff barriers, under the framework of the ECOWAS Trade Liberalization Scheme (ETLS), adopted in 1979;
- ii. The adoption, the same year, of the Protocol on the Free Movement of Persons and the Right of Establishment and Residence, further facilitated since 2014 by a common biometric identity card to be used as a travel document in the region in place of the ECOWAS Travel Certificate; the Protocol, in particular, pertains to non-national investors, including those outside the region, who can start and do business anywhere in the region and hire workers from any nationality;
- iii. A common external tariff (CET), effective since 1 January 2015 with a simplified code made up of five tariff bands;
- iv. Macroeconomic stability surveillance mechanisms through convergence criteria; and
- v. A single currency (XOF) for the subgroup of eight countries that make up the West African Economic and Monetary Union (WAEMU),⁴ with a common central bank (in charge of monetary policy) and a fixed exchange rate regime against the euro. The monetary union will be extended to the whole ECOWAS region – with Eco being the official name of the regional currency.

The dynamism has been reaffirmed through Vision 2020, adopted through a resolution in June 2007, which actively seeks to ‘create a borderless, peaceful, prosperous and cohesive region, built on good governance and where people have the capacity to access and harness its enormous resources through the creation of opportunities for sustainable development and environmental preservation’.⁵

The ensuing collective and national efforts are meant to further raise the region’s attractiveness, which rests on improved peace security and stability, strong institutions, ease of doing business, high-quality infrastructure, strong economic performance, intraregional and international trade performance, as well as large foreign direct investment (FDI) inflows.

1.2. ECOWAS: A PEACEFUL, SECURE AND STABLE REGION

The region has become a more peaceful place to live and do business. Although some countries of the region have recently faced political turmoil, others have been ranked by the World Bank among the most politically stable and less violent on the continent. The latest figures of the World Governance Indicators, in their ‘Political Stability/ No Violence’ dimension, have ranked the region as peaceful place: “The region averages 36.8/100, in comparison to other regions such as the Arab Maghreb Union (AMU) or the Common Market for Eastern and Southern Africa (COMESA) which average 29.2/100 and 35.1/100 respectively.”⁶

The number of internally displaced persons resulting from conflict and violence has decreased by 27.3% since 2013 to reach 318,944 in 2018 in the region. Elsewhere in Africa, the trend has been in the opposite direction, with corresponding figures of 47.5% and 624,071. Security has also been improving significantly, with an average of 2.5 crimes per 100,000 people, against 10 elsewhere in Africa.⁷

There are, however, some concerns related to political and religious turmoil. They include instability and violence that quite often mars national election processes, such as recently in Guinea and the Republic of Cote d’Ivoire, or military coups that undermine the democratic process, such as in the Republic of Mali. Religion-based violence and terrorism are also prevalent, most notably in the Sahel region of Mali, Burkina Faso, the Republic of the Niger and the Federal Republic of Nigeria. Sahel is the transition region between the Saharan Desert to the north and the Sudanese savanna to the south, stretching between the Atlantic Ocean to the west and the Red Sea to the east. If the West African Sahel has indeed experienced instability in the recent decades, the region outside the Sahel, which is of a larger size (except in Niger), is more of a haven, being spared from such instability. The situation is improving as a result of national and collective efforts, with support in many cases from Western powers, although the way to lasting peace, security and stability proves relatively long.

Additionally, the establishment in June 2015 of the Mediation Facilitation Division (MFD), a directorate within the ECOWAS Department of Political Affairs, Peace and Security (PAPS),

4 The eight WAEMU countries are the Republic of Benin, Burkina Faso, the Republic of Guinea-Bissau (joined in May 1997), Cote d’Ivoire, Mali, Niger, the Republic of Senegal, and the Togolese Republic.

5 Source: <https://www.ecowas.int/about-ecowas/vision-2020/>.

6 Source: author’s calculations, based on data from World Bank, WIPO and Heritage Foundation. Scores are averages for 2010-2018 on 0-100 scale and high values are synonymous with high quality institutions

7 Source: World Bank’s World Development Indicators, and author’s calculations.



constitutes an important instrument for conflict prevention, management, resolution, peacekeeping and security. It aims to promote 'preventive diplomacy in the region through competence and skills enhancement of mediators, information sharing and logistical support'.⁸ Specific interventions include the creation of an enabling environment for the resolution of pre-electoral/ political disputes prior to holding elections (such as in Guinea in 2015 and in Niger in 2015–16), and providing technical support to the ECOWAS special envoys tasked to resolve political and institutional crises (such as in Guinea Bissau in 2015). All of these are further indications of the region's strong commitment towards greater peace and stability.

1.3. INSTITUTIONAL DEVELOPMENT

The quality of the institutional setting has also been on the rise as populations and governments across the region (and the whole continent) resolutely embrace democratic principles and rule of law. Almost all related indicators have shown significant improvement across the region, often at a faster pace than the rest of Africa. For example, ECOWAS countries rank higher in the Index of Economic Freedom⁹ that captures countries' ability to 'promote economic opportunity, individual empowerment and prosperity' through:

- The rule of law (property rights, government integrity and judicial effectiveness);
- Government size (government spending, tax burden and fiscal health);
- Regulatory efficiency (business freedom, labour freedom and monetary freedom); and
- Open markets (trade, investment, and financial freedom).

In the last decade, countries across the region have gained 2.3% to reach the average score of 55.8/100 in 2020. More than half of them (eight) make up the 20 African countries with the highest scores. Overall, the region is second to the SADC, which scored 57.5 the same year.

The region is also consistently ahead of the rest of the continent when it comes to the World Bank's indicators that capture governance quality. They comprise voice and accountability, government

effectiveness, regulatory quality, rule of law and control of corruption, in addition to political stability and absence of violence. In each one of these dimensions, the 2019 survey reveals positive and significant differentials in favour of ECOWAS countries, ranging from 1.6% (political stability and absence of violence) to 5.5% (regulatory quality) and 12.7% (voice and accountability).¹⁰ These differences are indicative of how far traditions and institutions, by which authority is exercised, have been accommodating business activities in the regional context, as opposed to other parts of Africa. In fact, investors tend to be very sensitive to 'the process by which governments are selected, monitored and replaced; the capacity of the government to effectively formulate and implement sound policies; and the respect of citizens and the state for the institutions that govern economic and social interactions among them'.¹¹

When it comes to dispute settlements between an investor and a State, the Protocol on the Community Court of Justice established the ECOWAS Court of Justice in 1991, based in Abuja, Nigeria. Since Supplementary Protocol A/SP.1/01/05 in 2005, any private person can access the judicial organ for disputes arising under ECOWAS community law. In particular, under Article 9 of the Protocol, the court has jurisdiction over any matter provided for in an agreement where the parties provide that the court shall settle disputes arising from the agreement. Its rulings supersede national legislations and have to be automatically enforced by national courts. Disputes can be between a private party (investor or business, etc.) and a member state or between two private parties.

8 Source: ECOWAS (2020). 'ECOWAS Capacity Building Training Programmes On Dialogue And Mediation: Lessons Learnt And Assessment Study' (Page 11).

9 Source: <https://www.heritage.org/index/ranking>.

10 Source: <https://info.worldbank.org/governance/wgi/>; following quotes are from the same source.

11 Quotes are from the World Bank's WGI website (<http://info.worldbank.org/governance/wgi/>).



Table 3: Institutional quality in ECOWAS and other major African RECs

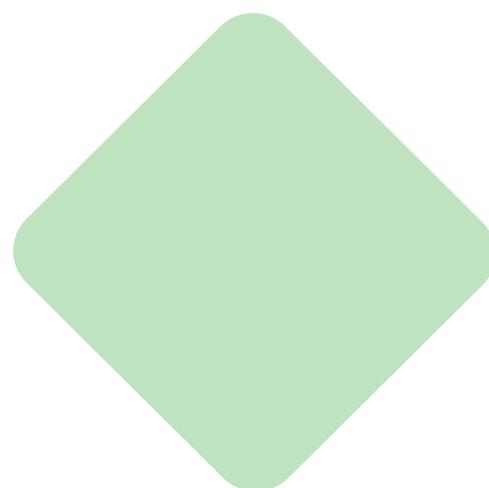
	ECOWAS	AMU	COMESA	ECCAS	SADC
Global Innovation Index (score 0–100)	20.2	26	23	22.6	24.5
Political stability/no violence (score 0–100)	37.5	28.7	35.0	32.8	43.6
Rule of law (score 0–100)	38.3	36.7	35.4	27.6	38.4
Control of corruption (score 0–100)	40.4	36.2	34.6	29.7	40.0
Regulatory quality (score 0–100)	38.3	29.8	33.0	29.5	38.0
Index of Economic Freedom (score: 0–100)	55.8	55.3	54.8	52.6	57.5

Source: Author's calculations, based on data from the World Bank and World Intellectual Property Organization.

In addition to the judicial organ, the administrative structure includes the ECOWAS Commission, the administrative governing instrument that is viewed as the 'engine room of all ECOWAS programs, projects and activities'.¹² Headquartered in Abuja, Nigeria, it is mainly tasked with implementing regional programmes and protocols through the adoption of rules that have legal force. The Commission also makes recommendations, gives advice and provides support to country members to develop their capacities for national appropriation of regional agreements.

The ECOWAS Bank for Investment and Development (EBID) is another important regional institution.¹³ Since its establishment in 1999, as a replacement of the Fund for Cooperation, Compensation and Development of the Economic Community of West African States (ECOWAS Fund), the EBID has been contributing to the financing of infrastructure projects relating to regional integration or any other development projects in the public and private sectors. The EBID has also assisted in the development of ECOWAS by funding special programmes. It has two subsidiaries: the ECOWAS Regional Development Fund (ERDF) for financing the public sector and the ECOWAS Regional Investment Bank (ERIB) for financing the private sector.

One of its corporate objects pertains to carrying out any commercial, industrial or agricultural activity, in as much as such activity is secondary to its objective. Among the beneficiaries of EBID's financial and technical assistance are corporate bodies from ECOWAS member states or from foreign countries desirous of investing in the ECOWAS zone, in sectors within EBID's areas of intervention. For private sector project funding, requests submitted to the president of the bank can top \$22.5 million, insofar as they fall within the scope of its areas of intervention. The latter include industrial activities such as agribusiness, mining industry, other industries, technology transfer, technological innovation, and services sectors such as financial services or services related to information technology, financial engineering or hotels.¹⁴



12 More details about the specific responsibilities and functions of the ECOWAS Commission and how it is manned can be found at <https://www.ecowas.int/institutions/ecowas-commission/>.

13 Additional institutions include the Authority of Heads of State and Government, the Council of Ministers, the Community Parliament, and specialized technical committees. There are also ECOWAS specialized agencies, such as the West African Health Organization (WAHO), the West African Monetary Agency (WAMA), the West African Monetary Institute (WAMI) the Inter Governmental Action Group Against Money Laundering in West Africa (GIABA), ECOWAS Gender Development Centre (EGDC), ECOWAS Youth and Sports Development Centre (EYSCD), ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE), ECOWAS Regional Electricity Regulatory Authority (ERERA), West African Power Pool (WAPP), Regional Agency for Agriculture and Food (RAAF), ECOWAS Project Preparation and Development Unit (PPDU), the Water Resources Coordination Centre, and the ECOWAS Brown Card Scheme. Overall, the general structure resembles that of the European Union.

14 Additional details, including specific private sector projects already funded at national or regional levels, can be found at <https://bidc-ebid.org/en/home/aboutus>.

1.4. EASE OF +ESS

Doing business in the region is becoming easier. The overall score has, in effect, increased by 10.6% in the last decade to reach an average score of 53.4 out of 100 in the 2020 survey. The increase is the highest in Africa: it is more than twice the changes in other RECs. The corresponding strong pace of reforms would, in the near term, make doing business in the region equally easy or even easier than the rest of Africa.

The current business environment makes starting a business much easier and less costly in the ECOWAS region, on average, compared to other African RECs. For example, it takes less time to register a business, the number of procedures involved is lower and the corresponding fees are among the lowest in Africa.

The region provides the strongest legal rights protection system in Africa, as far as the credit market and minority shareholders are concerned.

Trade costs, as related to border and document compliance, are among the lowest on the continent, as is the recovery rate when it comes to resolving insolvency.

Additionally, the region is well perceived by domestic and international business communities when it comes to market prospects such as size, growth, intensity, consumption capacity and receptivity, and commercial infrastructure, economic freedom and country risk. According to the 2020 Market Potential Index, three out of the 15 African countries that were ranked were located in the region: Cote d'Ivoire, Nigeria and the Republic of Ghana. They scored an average of 19/100, which was higher than their fellow Africans scored (15.5).¹⁵

In the Best for Business category, Ghana, Senegal, Cabo Verde, Nigeria, Cote d'Ivoire and Benin are ranked among the top 20 African countries, as a combination of GDP growth, the level of development (GDP per capita), trade performance (trade balance/GDP) and market size (population).¹⁶



¹⁵ Source: <https://globaleledge.msu.edu/mpi/2020>.

¹⁶ Source: <https://www.forbes.com/best-countries-for-business/list/#tab:overall>.

Table 4: Doing business in ECOWAS and other major African RECs					
	ECOWAS	AMU	COMESA	ECCAS	SADC
Overall score 2020	53.4	54.9	54.9	44.5	58.2
Change – since 2010	10.6	4.9	6.6	4.7	5.0
Starting a business					
Starting a business – procedures (number)	5.5	6.6	7.6	7.6	7.8
Time (days)	9.6	15.4	23.1	22.3	25.7
Paid-in minimum capital (% of income per capita)	3.5	6.0	7.5	25.8	0.3
Dealing with construction permits – score	58.7	58.6	56.9	57.4	65.0
Procedures (number)	16.1	14.8	13.9	14.3	14.0
Time (days)	137.2	106.5	137.0	154.0	149.7
Cost (% of warehouse value)	11.1	4.5	8.0	10.4	7.0
Getting electricity – score	49.9	70.0	54.4	46.8	59.7
Procedures (number)	5.3	4.4	4.5	5.5	5.3
Time (days)	124.3	73.0	100.1	94.1	111.1
Reliability of supply and transparency of tariff index	15.0	45.0	24.3	12.5	31.7
Price of electricity (US cents per kWh)	21.0	10.5	13.7	14.2	14.1
Registering property – score	53.4	58.8	60.6	50.0	56.7
Procedures (number)	5.8	5.0	6.0	5.7	6.3
Time (days)	51.1	31.8	36.7	58.5	51.1
Cost (% of property value)	7.4	4.8	4.6	8.8	6.7
Reliability of infrastructure index	15.8	43.8	35.8	18.2	30.0
Getting credit – score	47.3	29.0	51.3	37.7	53.7
Strength of legal rights index	50.6	15.0	47.9	42.4	41.7
Credit bureau coverage (% of adults)	7.0	6.3	12.0	1.4	23.9
Protecting minority investors – score	40.5	40.4	46.4	27.8	47.3
Extent of shareholder rights index	45.6	33.3	38.5	--	38.9
Extent of corporate transparency index	23.8	31.4	29.5	--	34.3
Strength of minority investor protection index	40.5	40.4	46.4	27.8	47.3
Paying taxes – score	56.2	63.3	67.5	45.0	70.6
Payments (number per year)	40.7	18.6	28.1	42.0	31.3
Time (hours per year)	268.7	344.6	239.8	458.8	206.5
Total tax and contribution rate (% of profit)	46.9	54.4	35.4	53.3	31.8
Trading across borders – score	56.7	64.7	55.7	39.0	61.1
Time, border/doc. compliance, export/import (hours)	91.8	66.9	100.6	144.0	78.7
Cost, border/doc. compliance, export/import (USD)	388.7	340.1	426.0	657.4	419.4
Enforcing contracts – score	50.1	58.3	51.4	41.1	49.2
Time (days)	658.9	553.0	632.6	777.4	694.7
Cost (% of claim)	42.0	24.1	40.1	50.2	43.6
Quality of judicial processes index	39.3	37.2	41.3	33.6	43.7
Resolving insolvency – score	38.5	52.1	45.6	36.4	44.6
Time (years)	3.1	2.0	2.5	3.9	2.2
Cost (% of estate)	20.9	10.7	19.1	33.5	16.7
Recovery rate (cents on the dollar)	25.1	43.6	30.5	15.3	34.9

Note: All scores are on a 0–100 scale, unless otherwise specified. Darker grey shadings represent areas where the ECOWAS region fares better than the rest, and lighter grey shadings correspond to the region being ranked second.

Source: Author compilations, based on data from Doing Business 2020, World Bank (<https://www.doingbusiness.org/en/data>).

1.5. INFRASTRUCTURE (HARD AND SOFT)

When it comes to physical (hard) infrastructure, according to the African Infrastructure Development Index, the region is trailing other RECs, but there is noticeable improvement that suggests it is catching up, as it has embarked on ambitious regional and national infrastructure development programmes.

As far as logistics performance is concerned, the overall World Bank ranking puts the region third among Africa's RECs. The dimension in which the region comes first is the 'ability to track and trace consignments'. For the remaining sub-components of the overall index, the region comes second for the 'ease of arranging competitively priced shipments'.

Furthermore, from the perspective of the Global Cities Index, Abidjan, Accra and Lagos have been ranked among Africa's most vibrant and competitive cities in 2015–19.¹⁷ These rankings are indicative of high competitiveness in key areas ranging from business activities to culture to human capital, political engagement and information exchange. They are suggestive of the general state of personal well-being, the economy, innovation and governance,

which are 'important factors multinational corporations to non-governmental organizations should consider as they decide where and why to invest'.

Further to the region's dynamism and vibrancy, the 2020 Global Innovation Index ranked Senegal, Ghana, Cote d'Ivoire and Nigeria among the top 15 most innovative economies in Africa.¹⁸ This favourable outcome is a result of high-quality and fairly supportive 'institutions, human capital and research, infrastructure, market and business sophistication and the scope of knowledge and technology and creative outputs'.

As a way to attract FDI, increase exports, create jobs and generate productivity spillovers, each of the West African countries has developed at least one special economic zone (SEZ). The general goal is to strengthen the tendency for manufacturing and service industries to geographically concentrate in cities and industrial clusters, as a way to 'build resilient infrastructure, promote sustainable industrialization and foster innovation'.¹⁹

Table 5: Infrastructure quality in ECOWAS and other major African RECs

	ECOWAS	AMU	COMESA	ECCAS	SADC
Logistics Performance Index (World Bank): Overall score	48.9	48.0	49.7	47.8	50.0
Ability to track and trace consignments	51.4	48.3	49.5	46.5	50.7
Competence and quality of logistics services	46.7	45.7	49.7	47.4	49.4
Ease of arranging competitively priced shipments	50.4	46.6	49.6	50.9	49.5
Efficiency of customs clearance process	44.1	44.0	46.4	43.6	46.9
Frequency with which shipments reach consignee within scheduled or expected time	56.3	57.3	56.3	54.0	57.5
African Infrastructure Development Index (AfDB): Overall	20.6	58.5	34.0	18.2	33.3
Transport	6.9	16.8	15.7	6.1	13.9
Electricity	17.0	32.5	19.7	13.0	25.0
Information and communications technology (ICT)	17.0	32.5	19.7	13.0	25.0
Water and sanitation system	63.1	90.2	66.5	61.3	67.0

Note: Values are between 0 and 100, and higher scores indicate better performance.

Source: Author calculations based on data from the World Bank's Logistics Performance Index, and from the African Development Bank (<http://infrastructureafrica.opendataforafrica.org/hwkjvxf/national-infrastructure>).

17 Source: <https://www.kearney.com/global-cities/2019>; the next quote is from the same source.

18 Source: <https://www.globalinnovationindex.org/analysis-indicator>; the next quote is from the same source.

19 This is one of the UN Sustainable Development Goals (SDGs, the 9th), and it is said to have been adopted at the urging of African delegations.

The functionality of these SEZs is very diverse, in line with the main objective assigned to them by law. They include export processing zones, free zones, international business centres, technology villages, business parks, industrial parks, gas parks and economic cities. In 2018, 56 SEZs were located in West Africa. Each ECOWAS member country has at least one SEZ, either fully operational or under development, and the most recent ones include the cross-border SEZ between Cote d'Ivoire, Burkina Faso and Mali in 2018.²⁰ The smallest SEZ is in Sierra Leone (less than 100 hectares), and the largest, from an African perspective, are in Senegal and Ghana (more than 1,000 ha).²¹ These SEZs tend to be multi-activity platforms (53 of them), as they are open to a large variety of business activities often interrelated, while only three are specialized in specific activities.

While the qualitative performance of SEZs in Africa tends to be limited, these schemes still remain attractive and viable instruments for industrial policies.²² Past experience and lessons from success stories around the world tend to underlie the design of most recent SEZs across the region (14 since 2000). The expected greater potentials for industrialization mean that investors established in these specific locations can definitely enjoy a host of fiscal and regulatory incentives and infrastructure support.

1.6. ECOWAS ECONOMIC PERFORMANCE

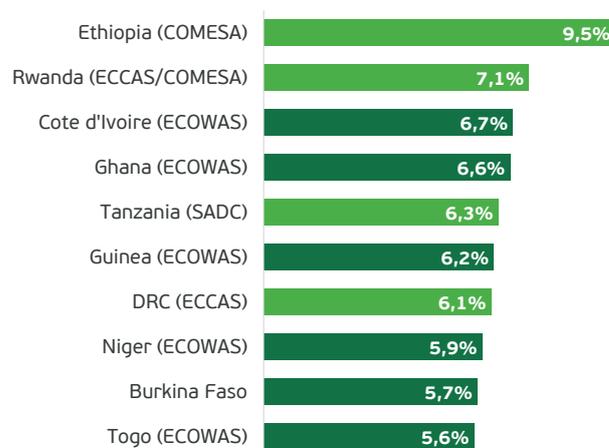
Prior to the global COVID-19 pandemic, the ECOWAS region performed well above other RECs in economic growth. Since 2010, the region has grown an average 4.7%, which is almost 1% higher than the closest region (SADC, with 3.8%). Moreover, the region is home to six out of the 10 fastest-growing African economies in the last decade, with an average growth of 5.6% (Togo) to 6.7% (Cote d'Ivoire).

For key macroeconomic indicators, the region has been performing relatively well. It has the lowest unemployment rates, especially for youth. Inflation rates are also very low, as well as public debt burden. All of these point to a greater macroeconomic stability, a key driver to reduced risk and uncertainty for businesses.

Economic growth has also been relatively inclusive, as poverty has declined significantly. Most countries in the region have gone from high rates of 60% on average in the early 2000s to approximately 30% (32.6% in Senegal and 33.5% in Cote d'Ivoire).²³

Population dynamics have also benefitted economic growth. Total population has increased faster in the region (2.7% average) than the whole continent (2.5% average). In 2019, it reached 386.9 million (28.9% of the total African population of 1.34 billion), making the region the second-largest consumer market in Africa.

Figure 2: Real GDP growth of the fastest-growing African economies (2010–19)



Source: Author, based on World Bank data.

20 So far, the shared SEZ has yet to be effective, and various aspects such as related its governance or management, issuance of licences or permissions and tax collection have not yet been formally developed. Lack of significant political will and insecurity in the region are some reasons often evoked.

21 Source: UNCTAD: World Investment Report 2019 – Special Economic Zones. Retrieved from <https://investmentpolicy.unctad.org/publications/1204/world-investment-report-2019---special-economic-zones>.

22 Additional discussions can be found in Newman, C. and J. Page (2017): Industrial clusters: The case for Special Economic Zones in Africa. Wider Working Paper 2017/15. Retrieved from <https://www.wider.unu.edu/publication/industrial-clusters-1#:~:text=The%20case%20for%20Special%20Economic.to%20learning%20and%20technology%20transfers>.

23 Sources: https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/2018AEO/African_Economic_Outlook_2018_West-Africa.pdf and http://www.uemoa.int/sites/default/files/bibliotheque/indicateurs_de_pauvrete_monetaire_et_dinegalite_de_la_premiere_enquete_harmonisee_sur_les_conditions_de_vie_des_menages_dans_les_etats_membres_de_luemoa.pdf.

As a result of improved living conditions, urban population increased by 9.7% since the turn of the century, above the continental average of 8.9%. Of the 48 African metropolises with a population of more than one million in 2019, more than one-third (14) are located in West Africa, the largest being Lagos, Nigeria, with 21.3 million. Furthermore, ownership of an account at a financial institution or with a mobile money service provider has also increased to reach

between 38.5% (Benin) and 58.6% (Ghana). At the same time, access to electricity has almost doubled in the last two decades to reach 48% in 2019. Human capital has also improved, with literacy rates averaging 48.6% among adults in 2019. Among youth (15–24 years old), the average is much higher, at 64%, with a significant difference across gender: higher for young males (69%) than their female counterparts (57.1%).

Table 6: Economic performance in ECOWAS and other major African RECs

	ECOWAS	AMU	COMESA	ECCAS	SADC
GDP (nominal, USD billion)	689.2	387.2	746.1	246.3	691.2
Share of agriculture (%)	27.1	14	18.6	19.8	10.4
Share of industry (%)	19.2	29.6	23	31.9	25.8
GDP growth, real, 2010–19	4.7	1.7	3.6	2.6	3.8
GDP per capita (nominal, USD)	1 301.6	3 966.3	3 244.2	2 460.2	4 089.5
Competitiveness score, 0–100	47.3	53.4	48.6	37.0	48.2
Population (million)	386.9	102.5	553.8	198.5	353.1
Population growth (%)	2.6	1.7	2.2	2.7	2.0
Urban population (% of total)	45.9	68.1	38.4	51.6	43.5
Labour force (% of total population)	37.4	32.0	41.5	39.8	42.9
Literacy, adults (+25 years, %)	48.6	69.6	75.8	68.1	83.7
Literacy, youth (15–24 years, %)	63.0	86.4	87.4	75.9	90.4
<i>Male</i>	69.0	88.9	88.0	79.3	91.3
<i>Female</i>	57.1	83.8	86.8	72.8	89.6
Unemployment, youth (% of total labour force, 15–24yrs)	8.6	30.6	14.2	12.1	21.4
Self-employed, total (% of total employment)	78.8	34.2	61.1	69.1	57.7
Inflation – consumer prices (%)	3.4	2.8	9.3	3.4	5.5
External debt stock (% of gross national income)	38.2	58.3	50.6	38.6	42.7
Domestic credit to the private sector (% of GDP)	20.2	48.0	24.3	15.1	36.8
FDI stock (current, USD billion)	171.7	137.0	253.1	75.0	316.3
Domestic private investment (% of GDP)	23.6	35.4	23.1	20.8	23.8
Trade balance (% of GDP)	-15.6	-5.2	-6.7	-0.5	-13.5
Poverty rate, \$1.9, 2011, purchasing power parity (PPP) (%)	33.9	2.4	33.7	41.0	33.4
Access to electricity (% of population)	48.5	82.3	52.1	46.8	52.3
Account ownership (% of population, ages 15+)	36.5	39.0	49.4	32.9	50.3

Source: Author calculations, based on World Bank and World Economic Forum data.

1.7. TRADE AND FOREIGN MARKET ACCESS

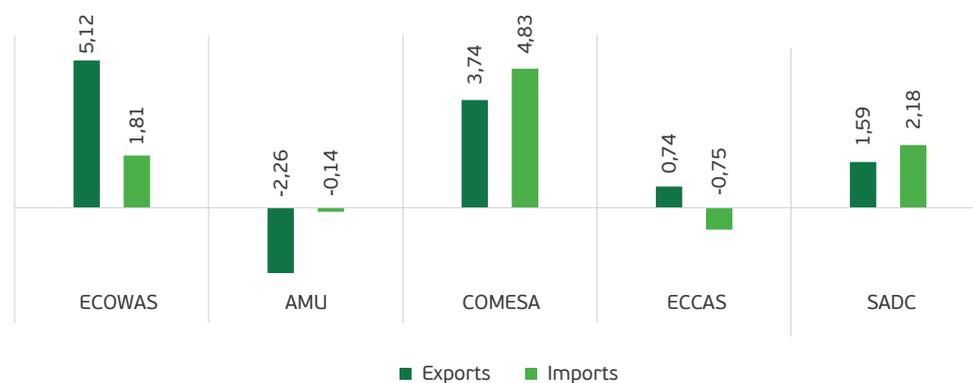
The ECOWAS region has experienced the largest increase in total exports, with an average rate of 5.1% annually, to reach \$196.2 billion in 2018 at constant prices (the third-largest among the RECs). In the same period, imports increased by 1.8% to culminate at \$134 billion in 2018. Combined export and import growth suggests a reduction in trade deficit.

The region traded 12% with itself in 2016, only second to the SADC (21%). This is up from the 1980's figure of 3.9% when the ETLs entered into

force.²⁴ Current major trading partners are outside the continent and represent 83.7% of the region's total. African partners outside the region account for only 5.6%.

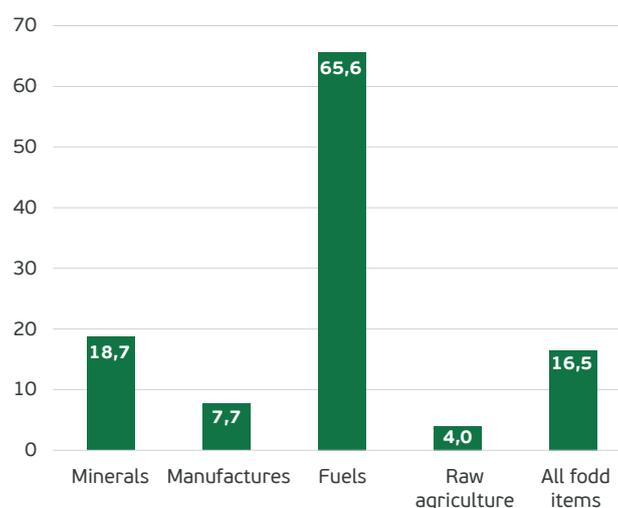
Trade composition, which has changed relatively little in the last decade, from the perspective of commodities, shows a noticeable concentration of the export portfolio along the regional (revealed) comparative advantages. Fuels and minerals represented respectively 58.3% and 16.6% of total merchandise exports of the region in 2018.

Figure 3: Export and import growth (%) in ECOWAS and other RECs (2010–18)



Source: Author calculations, based on World Bank data.

Figure 4: Commodity exports composition of West African countries (USD billion, 2018)



Source: United Nations Conference on Trade and Development (UNCTAD) (<https://stats.unctad.org/handbook/MerchandiseTrade/ByProduct.html>).

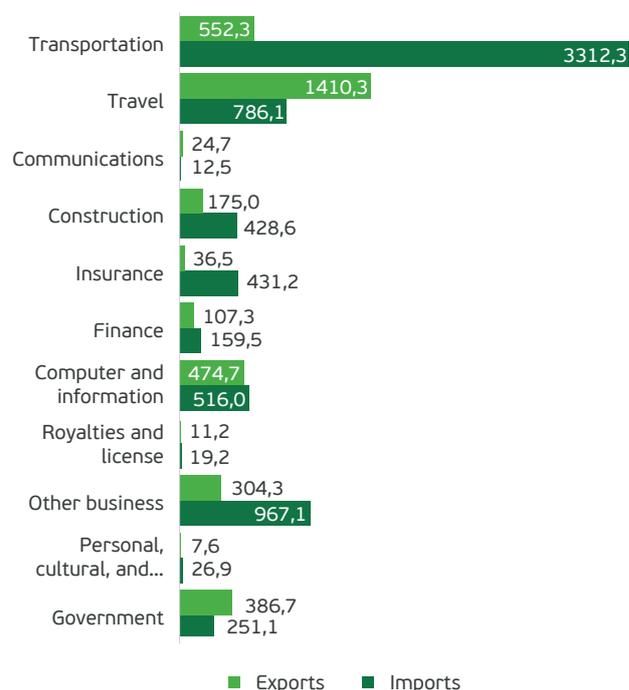
24 Source: UNCTAD (https://unctad.org/system/files/official-document/ditctab2019d3_en.pdf).

Table 7: Comparative advantages of ECOWAS member countries (2018)

Member countries	Products
Benin	Cotton; Oilseeds and oleaginous fruits; fruits and nuts (excluding oil nuts), fresh or dried; wood in the rough or roughly squared; fixed vegetable fats and oils, crude, refined
Burkina Faso	Cotton; gold, non-monetary; oilseeds and oleaginous fruits; zinc; fruits and nuts (excluding oil nuts), fresh or dried
Cabo Verde	Fish and crustaceans; non-ferrous base metal waste and scrap; textiles; animal oils and fats; ferrous waste, scrap; re-melting ingots, iron, steel
Cote d'Ivoire	Cocoa; natural rubber and similar gums, in primary forms; cotton; fruits and nuts (excluding oil nuts), fresh or dried; coffee and coffee substitutes
Gambia	Wood in the rough or roughly squared; worn textile/clothing articles; fruits and nuts (excluding oil nuts), fresh or dried; fuel wood and wood charcoal; fabrics, woven, of man-made fabrics
Ghana	Cocoa; gold, non-monetary; wood in the rough or roughly squared; fruits and nuts (excluding oil nuts), fresh or dried; natural rubber and similar gums, in primary forms
Guinea	Aluminium ores and concentrates; gold, non-monetary; iron ore and concentrates; natural rubber and similar gums, in primary forms; fish, dried, salted or in brine and smoked fish
Guinea Bissau	Fruits and nuts (excluding oil nuts), fresh or dried; fish, fresh (live or dead), chilled or frozen; fish, dried, salted or in brine and smoked fish; wood in the rough or roughly squared; cotton
Liberia	Natural rubber and similar gums, in primary forms; wood in the rough or roughly squared; ships, boats and floating structures; iron ore and concentrates; silk
Mali	Cotton; gold, non-monetary; live animals; fixed vegetable fats and oils, crude, refined; wood in the rough or roughly squared
Mauritania	Crustaceans, molluscs and aquatic invertebrates; animals oils and fats; works of art, collectors' pieces and antiques; fish, fresh (live or dead), chilled or frozen; iron ore and concentrates
Niger	Ores and concentrates of uranium or thorium; radioactive materials and associated materials; rice; fixed vegetable fats and oils, crude, refined; worn textile/clothing articles
Nigeria	Petroleum oils, crude; fuel wood and wood charcoal; natural gas, whether or not liquefied; petroleum gases; cocoa
Senegal	Crude fertilizers; inorganic chemical elements, oxides and halogen salts; fish, fresh (live or dead), chilled or frozen; crustaceans, molluscs and aquatic invertebrates; lime and cement
Sierra Leone	Aluminium ores and concentrates; cocoa; iron ore and concentrates; wood in the rough or roughly squared; sugar, molasses and honey
Togo	Crude fertilizers; cotton; lime and cement; hides and skins, raw; electric current

Source: UNCTAD.

The services trade is also relatively important and has been picking up speed in the last decade to reach 7.1% of GDP on average across the region. Structurally, except for travel, communications and government-related services, the region is a net importer of services, especially for transportation, where the deficit is the largest. The trend has been towards a deterioration of trade balances overall, similar to the rest of the continent, while it is the opposite in the rest of the developing world. These trends are indicative of the relatively large potentials for expansion of domestic production and trade to meet increasing demand. This is especially the case for insurance, financial, intellectual property, other business, and travel services, which have registered the fastest-growing exports, at rates of 3.2%–6.9% in 2013–18.

Figure 5: Services trade composition of ECOWAS (2018)

Source: Author calculations, based on UN Comtrade data.

Foreign market access is key to international trade promotion for the region. With the European Union (EU), ECOWAS member countries and African countries have ease of access to the European market through the overall political and economic relations with the African, Caribbean and Pacific Group of States (ACP).²⁵ This privilege has contributed to making the EU the main export destination for West African transformed products from sectors such as fisheries, agribusiness and textiles.

The existing framework is set to evolve into economic partnership agreements (EPAs), through which West Africa and other ACP countries will have to remove import tariffs on EU-originated goods, but only partially during a 20-year transition period.²⁶ The new scheme is intended to help West Africa (and all ACP partners) to better integrate into the global trading system and is expected to support investment and economic growth in the region. It will lead to increased exports to the EU, stimulate investment and contribute to developing productive capacity, with a positive effect on employment.²⁷

The EU–West Africa economic cooperation also includes aid for trade and trade-related assistance. Under this framework, the ECOWAS region has effectively benefitted from the development of: (i) trade-related infrastructure, which includes transport and storage, communications, and energy generation and supply; and (ii) productive capacity in the forms of business development and activities aimed at improving the business climate, privatization, assistance to banking and financial services, agriculture, forestry, fishing, industry, mineral resources and mining, and tourism. The framework also includes trade- and non-trade-related capacity building. The corresponding total aid-for-trade efforts amounted to €1.2 billion commitments in 2017.²⁸

With respect to the US market, the region has benefitted from the African Growth and Opportunity Act (AGOA) since 2001 (renewed in 2015 for 10 more years) and the trade and investment framework agreements (TIFAs) since 2014.²⁹ The former is a non-reciprocal trade preference programme that offers duty-free and quota-free access to the huge US market for selected sub-Saharan African products.³⁰ TIFAs are more of an institutional platform that ‘provides strategic frameworks and principles for dialogue on trade and investment issues between the United States and the other parties’,³¹ mostly around ‘issues of mutual interest with the objective of improving cooperation and enhancing opportunities for trade and investment’. Discussed topics at TIFA council yearly meetings include market access, labour, the environment, protection and enforcement of intellectual property rights, and, in appropriate cases, capacity building. There are various TIFAs both at the regional level with ECOWAS and with WAEMU, and with individual countries such as Ghana, the Republic of Liberia, and Nigeria.³²

25 The EU–ACP agreements constitute the overarching framework first set up in 1975 by the Lomé Convention (replaced in 2000 by the Cotonou Agreement, which introduced the economic partnership agreement). This cooperation scheme, the largest of its kind between developed (EU countries) and developing countries (some 79, of which 48 are in sub-Saharan Africa), revolves around three main pillars: development cooperation, economic and trade cooperation, and a political dimension.

26 The economic partnership agreement was enacted in 2000 (Cotonou Agreement), then revised in 2005. There have been concerns about the potentially negative impacts of the removal of tariffs on EU products, given the less competitive production systems and the loss of government tariff revenues in ACP economies, which explains the slow pace of the negotiations to implement the agreements, at both national level and regional level (jointly between WAEMU and ECOWAS). For example, ‘stepping stone’ agreements with Côte d’Ivoire and Ghana entered into provisional application on 3 September 2016 and 15 December 2016 respectively.

27 Source: https://trade.ec.europa.eu/doclib/docs/2014/july/tradoc_152694.pdf.

28 Source: https://ec.europa.eu/international-partnerships/system/files/eu-aid-for-trade-progress-report-2019_en.pdf.

29 All member countries are currently eligible to the AGOA provisions, except Mauritania (since 1 January 2019). Eligibility for product category specific compliance can be different across benefitting countries. For example, since 1 January 2020, Gambia and Niger are not eligible under the ‘wearing apparel’ provisions. See here for more details: <https://agoa.info/about-agoa/country-eligibility.html>.

30 See here for the detailed listing of products: <https://agoa.info/about-agoa/products.html>.

31 Source: <https://ustr.gov/trade-agreements/trade-investment-framework-agreements>. The next quote is from the same source.

32 Source: <https://ustr.gov/trade-agreements/trade-investment-framework-agreements>.

1.8. FDI IN ECOWAS: INFLOWS AND INCENTIVES

The region has always been an attractive place for foreign investment, as shown by relatively large inflows of FDI that have positively responded to the improving regulatory environment. In the past decade, the stock of FDI in the region has increased at record pace to reach \$191.5 billion in 2019, the third-largest behind the SADC (\$316.3 billion) and COMESA (\$302.9 billion). The increase by a factor of 2.2 in the region, or equivalently, at an annual rate of 9%, is by far the largest in Africa.

When it comes to investment promotion, especially FDI, one of the key frameworks at the regional level is the ECOWAS Common Investment Code (ECOWIC), which applies to the rights and obligations of member States and investors. Enacted in July 2018, the code aims to 'establish in the ECOWAS territory transparent, harmonized and predictable legal and institutional framework that applies to investment and to any investment-related measures'.³³ More specifically, under the monitoring of a regional body to be established by the ECOWAS Common Investment Market Council and to work with national advisory committees, code seeks to:

- Promote, facilitate, and protect investment that foster sustainable development of the region;
- Promote the adoption of common regional rules on investment;
- Improve investment and trade relations within the region and between the region and foreign investors, conducive to regional stability and

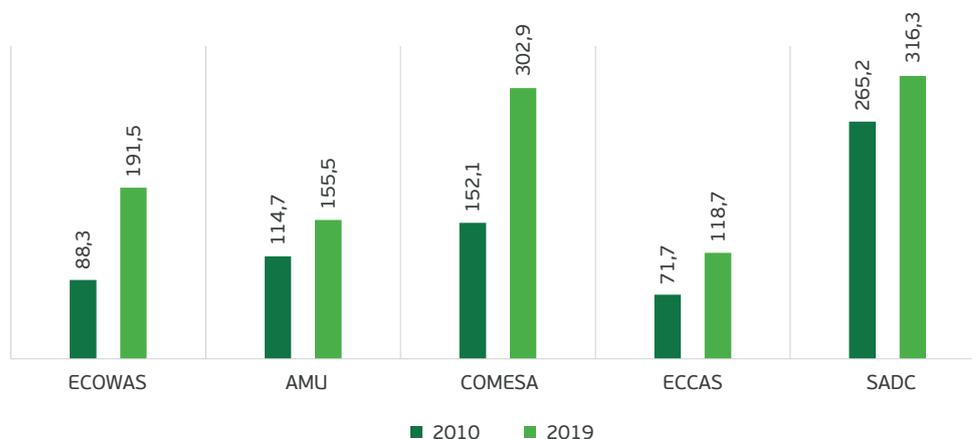
sustainable development;

- Enhance the role of both domestic and foreign direct investments in reducing poverty, increasing productive capacity, furthering growth, creating jobs, expanding trade, improving technology and transferring technology.³⁴

Several provisions of this landmark code set the conditions for a viable business environment that would mutually benefit both investors and the host country. For example, member States are encouraged to provide relatively strong incentives to investors, domestic and foreign alike. These incentives may take various forms, such as financial incentives in the forms of investment insurance, grants or loans at concessionary rates, tax holidays, subsidized infrastructure, or investment guarantees.³⁵

Foreign investment is generally viewed as a part of the overall development of local economies. Investors are expected to promote technology transfer and comply with international transfer pricing standards. When considering the investment, they are also expected to account for: (i) the participation in the implementation of national or regional economic and social plans; (ii) the creation of employment and vocational training; (iii) the priority of use of local raw materials and, in general, local products; and (iv) environmental and social impact assessment of their economic activities.

Figure 6: FDI total stock in ECOWAS and other African RECs (USD billion, 2019)



Source: Author, from UNCTAD data.

³³ Source: <https://wacomp.projects.ecowas.int/wp-content/uploads/2020/03/ECOWAS-COMMON-INVESTMENT-CODEENGLISH.pdf> (same source for the next quotes).

³⁴ ECOWIC Article 2.

³⁵ ECOWIC Article 19.

Additional components of regional and national approaches to further making the region an attractive place for FDI include:

- National investment promotion agencies that provide up-to-date information regarding the process by which investors, particularly foreigners, can settle into the host country, as well as guidance through the procedures for investment and setting up a business activity; the set of information generally relates to starting a business, legal obligations, obtaining an investment certificate, foreign taxpayer registration, dealing with local banks, import/export registration, land/building ownership, rules and regulations for foreigners, and investing in any existing SEZ;
- Single windows at national levels for: (i) starting a business, with the aim to streamline and speed up the administrative process; and (ii) engaging in foreign trade, generally through an electronic platform used by all operators and users of the foreign trade community (import, export, transit and transshipment), providing a single entry point for all customs and collection procedures and formalities.³⁶

1.9. STRUCTURAL REFORMS ACHIEVED/PLANNED

Ongoing ambitious and profound reforms are rightly expected to structurally change the region's trade and investment landscape. These reforms are part of well-thought-out programmes. The West African Competitiveness Programme (WACOMP) seeks to strengthen the performance, growth and contribution of industry, regional trade and exports of selected value chains, and improve the business climate at national and regional levels. The West Africa Common Industrial Policy (WACIP) aims to accelerate the region's industrialization. The West Africa Quality System Programme (WAQSP) seeks to strengthen the quality infrastructure for greater effectiveness, enhanced competitiveness and better intraregional and interregional trade participation. The Strategic Framework for Private Sector Development Strategy aims to make the private sector a vibrant engine of economic growth.

More specific actions plans include multimodal transport infrastructure, and the implementation of policies to promote physical cohesion among member countries and to facilitate the movement of persons, goods and services within the region, with special emphasis on increased access to landlocked countries. These harmonized national efforts, mainly through the West Africa Regional Transport and Transit Facilitation Project, a common initiative developed by ECOWAS and its subset, WAEMU, to speed up the road transport facilitation, include:

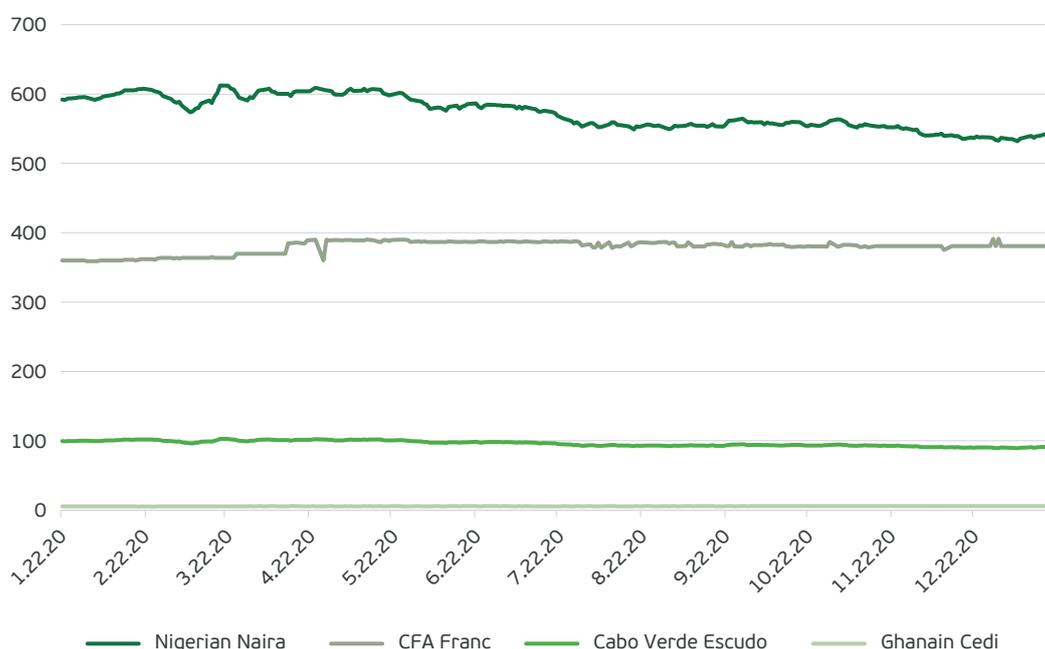
- The erection of joint border posts and controls along the interstate corridors;
- The simplification and harmonization of national rules, procedures and documents related to road transport;
- The harmonization of standards and procedures for the control of dimensions, weight and axle load of goods vehicles within ECOWAS member States;
- The update of the road transit information system;
- The development of transport corridors, such as the Nigeria–Cameroon multinational highway as part of the Trans-Africa Highway Programme, the Praia–Dakar–Abidjan highway (capital cities of Cabo Verde, Senegal and Cote d'Ivoire), the trans-Gambia transport corridor, and the Abidjan–Lagos Corridor;
- A deposit system to guarantee transit operations in the absence of such State-sponsored guarantee mechanisms.

The regional single currency project is also expected to further rationalize cross-border movement of goods (and capitals and persons). While the eight WAEMU countries share a single currency (XOF), each of the remaining ECOWAS countries has its own independent currency, with individual central banks. While the XOF is fixed against the euro (at a constant exchange rate of XOF 655.957/euro), the remaining currencies in the region are governed by flexible exchange rates.³⁷ Against the US dollar, though, each currency shows some very moderate volatility, as suggested in Figure 7, which depicts the daily exchange rate behaviour for three major currencies encompassing 10 of the West African countries (the rest tend to exhibit similar patterns).

36 As of 2019, single windows for cross-border trade existed in five West African countries: Burkina Faso, Niger, Nigeria, Senegal and Togo (source: <https://rammap-swim.wcoomd.org/>).

37 In addition to the West African CFA franc (XOF), there is the Central African CFA franc shared by six countries that make up the Economic and Monetary Community of Central African States (CEMAC), a subset of ECCAS. Both were created in December 1945, with similar profiles (fixed exchange regime against the euro, same rate of 655.9, with separate governing body – central bank). In exchange for XOF countries depositing 50% of their foreign reserves in the French Treasury, the latter guarantees an unlimited convertibility of the common currencies. The ECOWAS regional currency project (the ECO) is expected to mark an end to the West African CFA franc.

Figure 7: Daily exchange rates of selected West African currencies against the USD (365 days)



Note: The XOF is shared among eight countries that make up the WAEMU. The small volatility of the exchange rate appears in the small coefficients of variation (standard deviation over average), which range between 0.02 and 0.04 in the considered period.

Source: Yahoo Finance.

The process of unifying the region around a common currency is still under discussion, and the pace is marred with a great deal of political uncertainty. It involves first a common currency among ECOWAS non-XOF countries. The latter formed the West African Monetary Zone (WAMZ) in 2000. The agreement establishing WAMZ led to the set-up of the West African Monetary Institute (WAMI) in 2001, located in Accra, Ghana and tasked with the establishment of the West African Central Bank (WACB) and the launch of a single monetary unit, which will later be merged with the XOF to give birth of the ECOWAS common currency (the Eco). The process has been plagued by multiple delays and missed deadlines, most notably the WAMZ single monetary unit currency that is yet to be created.³⁸ However, the political commitments of all member States suggest that the monetary union is still a significant part of regional integration. From a foreign investor's perspective, the move to the Eco spells reduced cross-border transaction costs (associated with currency conversion and exchange rate volatility), enhanced market predictability and, it is hoped, increased flows of capital and goods (and persons).

When it comes to trade liberalization, mostly through the removal of both tariffs and non-tariff barriers, the formal process has been designed and conducted under the framework of the ECOWAS Trade Liberalization Scheme (ETLS).³⁹ In order to benefit from the free trade regime, products and companies have to be registered with national approvals committees, except enterprises from and goods produced in export processing zones or free zones and any other special economic schemes or customs territory. In 1988–2018, the number of registrations reached 6,212, and nearly half of them (48.2%) happened in the last decade. This indicates a renewed interest by local, regional and international investors, who are increasingly incentivized by the corresponding trade and business potentials.

The harmonization of customs procedures, under the common external tariff (CET) that entered into force on 1 January 2015 as part of the ETLS, has brought simplification and clarity across the region, with only five tariff bands and a common customs declaration form. While the actual implementation of the CET at national levels is the obligation of member States, the ECOWAS–WAEMU Joint Committee on CET has been tasked to first finalize the adjustment of the CET tariff structure and statistical nomenclature.

³⁸ Since its first introduction in 2003, the regional single currency was postponed several times (2005, 2010, 2014, 2015 and 2020). Discussions are still ongoing.

³⁹ Additional details can be found at <http://www.etls.ecowas.int/>.

After 2015, the joint committee would provide support and safeguard measures, in addition to serving as a regional coordinator and monitoring body, as countries start implementing the CET.

The strategic design of the ECOWAS CET aims to ensure:

- The availability of social goods, such as health and medical products, which are tariff-free (Category 0);
- The reduced cost of production, through relatively cheap input materials not available in the region, with 5% tariff (Category 1), and those with limited supply, at 10% (Category 2);
- Some protection of domestic industries, namely final goods that are at their ultimate stage of transformation, with a tariff at 20% (Category 3) or those that are strategic due to their level of vulnerability and potential for domestic production, regional integration, industrialization and value chain development, taxed at 35%.

This structure of the CET is expected to promote investment and business activities by providing fiscal incentives that guarantee the availability of cheap inputs of foreign origins and some protection to final output markets.

Trading across borders also benefits from the ECOWAS Trade Information System (ECOTIS), an online centralized portal developed by the ECOWAS commission to provide easily accessible, timely and relevant trade related information for informed business decisions.⁴⁰ It is an electronic platform designed by the ECOWAS Commission. Using existing information systems in the region, the portal provides a unique point of entry to support the promotion of intra-regional/continental and global trade and allows investors to fully appreciate the region's trade and business landscape, and gain valuable insights into existing and potential business opportunities.

At the continental level, the African Continental Free Trade Area (AfCFTA) will further reduce trade barriers, facilitate the free movement of people and labour and the right of residence and establishment,

and increase investment. The various wide-ranging protocols pertain to trade in goods, trade in services, rules and procedures on the settlement of disputes, investment, competition, and intellectual property rights. Effective implementation of the agreements was scheduled to start in January 2021, for a 10-year period for relatively advanced African countries, and 13 years for least developed countries (LDCs).⁴¹ It is estimated that AfCFTA will provide valuable and unique opportunities for businesses operating in a liberalized and unified market that is projected to reach 1.7 billion consumers by 2030, with a middle class of 600 million individuals and a cumulative GDP of \$3.4 trillion. By 2022, intracontinental trade is projected to increase by as much as 52.3%, while trade with the outside world would increase by 6%.⁴² The many expected benefits for trade and investment would profoundly reshape the continent's economies, as they could collectively emerge as a key player in the global trade and investment arena.⁴³

Additionally, the WTO Trade Facilitation Agreement is expected to further improve trade and economic proximity among West African countries and between the region and the rest of the continent (and beyond). Corresponding measures, which all West African Countries are currently implementing at various levels, aim to simplify required paperwork, the modernization of procedures and the harmonization of customs requirements. By addressing the vast amount of red tape that discourage the flow of goods across borders, the ensuing reduction in trade costs and the time needed to export and import has the potential to improve external market access, in the process providing greater opportunities for trade and investment.⁴⁴

Most member countries are strongly engaged in the process of domesticating regional provisions for a competitive and conducive business environment, to various degrees. The corresponding harmonization and unification of national investment policy regimes would add more predictability and readability of the overall regional business environment, as the region is becoming more and more accommodating to FDI.

40 Source: <https://ecotis.projects.ecowas.int/>.

41 The agreements aim at full liberalization for 90% of products, while 7% will need more time and 3% will not be liberalized. During the implementation process, national implementation committees will come up with a list of products across these three categories.

42 Source: https://unctad.org/system/files/non-official-document/tdb65_2d_pres_AUBramdeo_en.pdf.

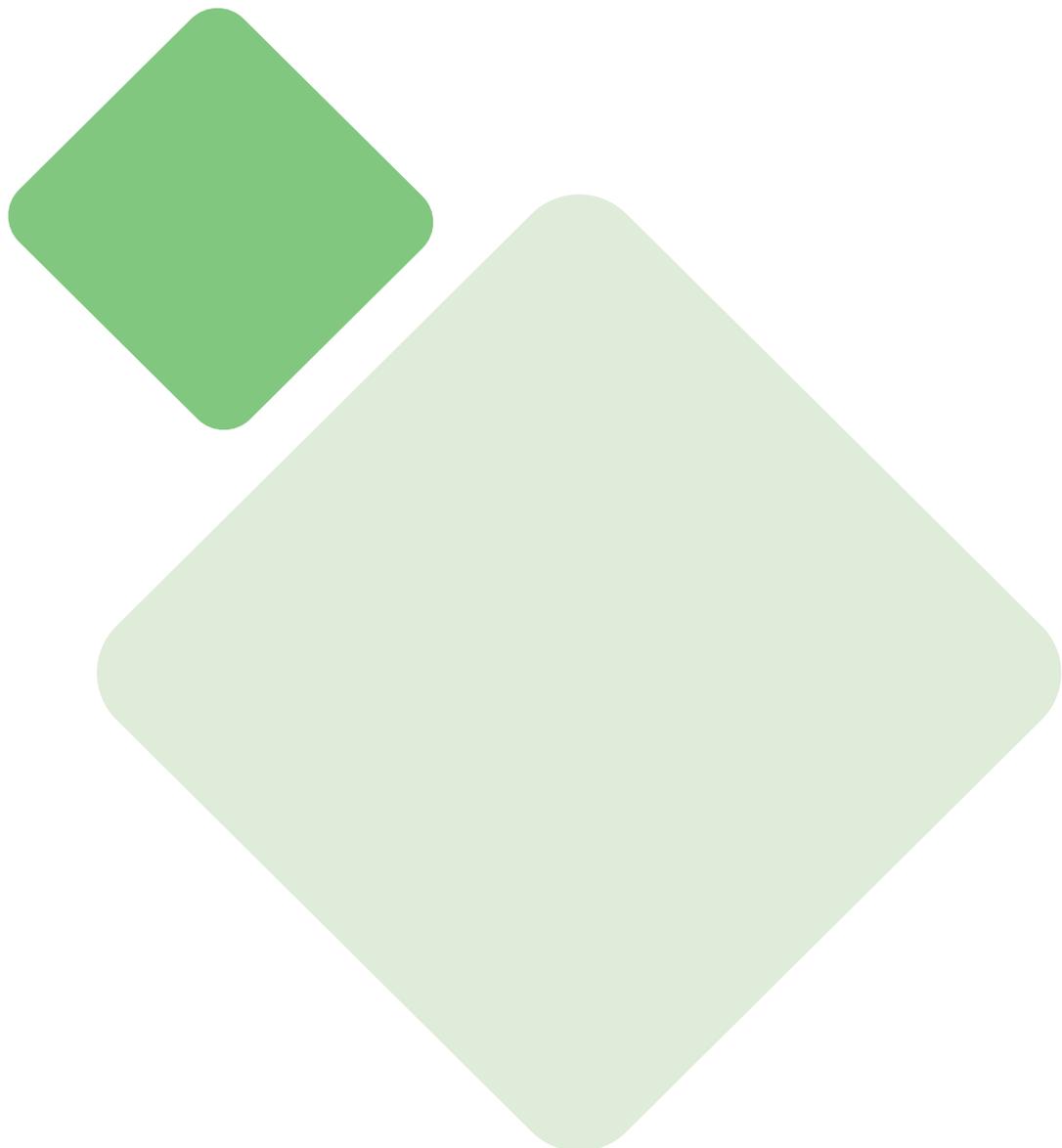
43 Source: <https://openknowledge.worldbank.org/bitstream/handle/10986/34139/9781464815591.pdf>.

44 The costs reduction as a result of trade facilitation is estimated to be equivalent for developing countries, especially in Africa, to a reduction in tariff by 219%. Source: https://www.wto.org/english/res_e/booksp_e/world_trade_report15_e.pdf.

1.10. CONCLUSION

In the face of increased competition to attract international businesses, West African countries arguably have a strong card to play. Being the first region in Africa to effectively embark on economic integration, the region has developed a sufficiently conducive and attractive environment for trade and investment. This is largely thanks to its natural hub status, strong economic growth, the vibrancy and innovative drive of its cities, great market potentials, an increasingly peaceful, secure and stable environment, high-quality soft and hard infrastructure and strong institutional quality (rule of law, control of corruption, and regulations).

Ongoing and planned structural reforms, at both regional and national levels, are indicative of the strong political commitment to further improve the conduciveness of the business environment and attract FDI. These individual and collective efforts have earned countries across the region the status of best African reformers. To the extent that investors are well aware of all of these positive developments, international businesses ready to settle in the region will undoubtedly enjoy great returns, while being part of a collective journey towards greater economic and social vibrancy and the emergence of a dominant economic player in Africa and beyond.



2. MANGO SECTOR IN ECOWAS REGION

2.1. ECOWAS MANGO SECTOR IN A GROWING GLOBAL MARKET

SPREAD OF PRODUCTION AND EXPORT IN ECOWAS

Mango trees come from Southern Asia (the Republic of India and the Republic of the Union of Myanmar) and were introduced in West Africa in the nineteenth century. Its expansion started in the coastal regions and quickly spread all over the subregion to Sahel areas.⁴⁵

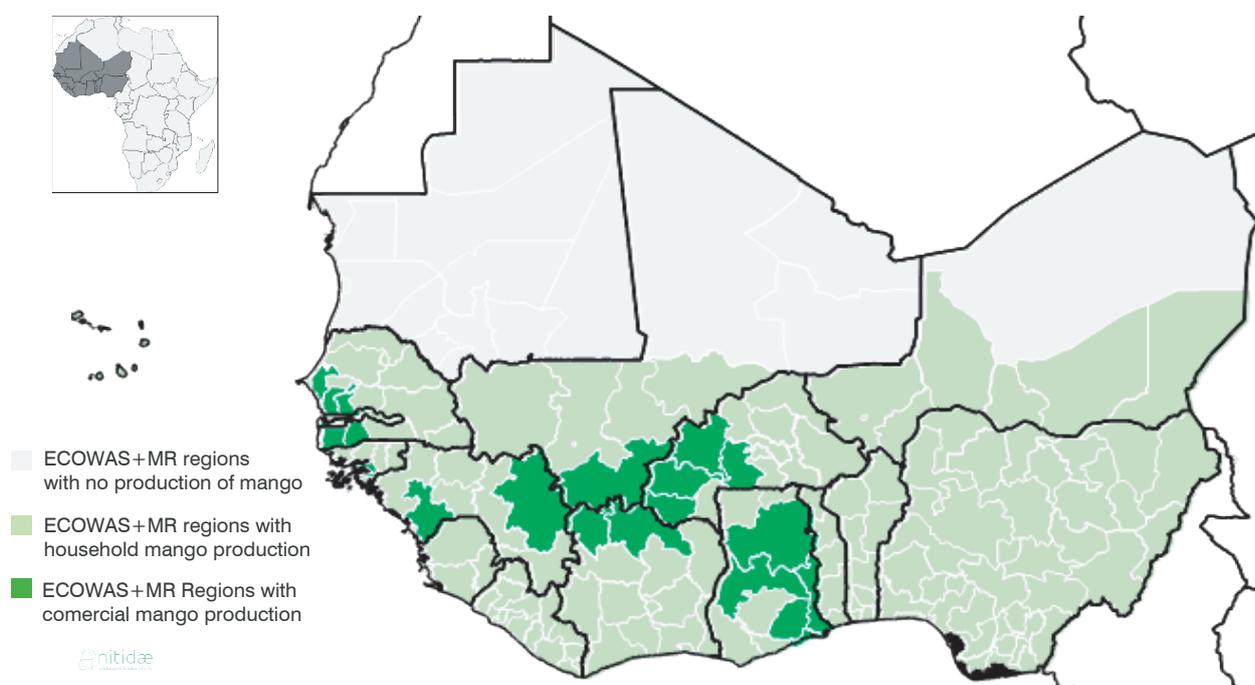
Mango tree can be grown in Sahel areas with less than 1,000 mm of rain per year and in subtropical areas with more than 2,000 mm of rain. Grafted trees start producing 3–4 years after plantation and for several decades thereafter. Many mango trees older than 100 years continue to produce mango fruits every year. Mango yields are very high in comparison with other fruit trees; a tree in full production (past 10 years after planting)

generally produce more than 50 kg/year. Thanks to this robustness, adaptability and high productivity, mango trees occupy almost all rural and urban areas of the ECOWAS region.

However, commercial production of mango is not as common as the presence of mango trees. While most villages in rural areas and many houses and gardens in towns include mango trees for self-consumption, commercial production of mango requires dedication of large surfaces of one hectare or more, and to carefully care for the trees, the harvest and the logistics of sales after harvest.

Some areas have specialized in commercial production (Figure 8). In those areas, hundreds of farmers invested in commercial mango plantations with the two exportable mango varieties: Kent (the most famous in the European market) and Keitt.

Figure 8: Mango production region in ECOWAS and Mauritania



Source: Nitidæ consultant.

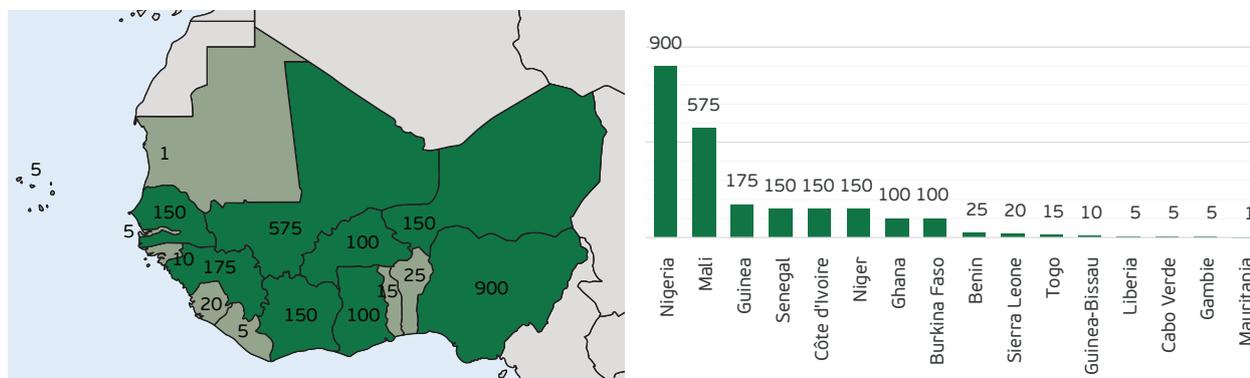
45 J.Y. Rey et al. (2004). 'The mango in French-speaking West Africa – Historical synthesis'. CIRAD, Fruits.

Figure 9: Average annual rainfall in West Africa



Source: Encyclopaedia Britannica, Inc.^{46, 47}

Figure 10: Estimated mango production in West Africa (in thousands of tons)



Source: Designed on the basis of official data (FAOSTAT, updated on the basis of industry feedback).

As visible in Figures 8 and 9, almost all of the commercial production is concentrated between the 750 mm and 1500 mm isohyet lines, which correspond to semi-arid Sahelo-Sudanese climate.

With less rain, mango trees can hardly survive and, when they do, they produce very little fruits. With more than 1,500 mm, commercial production is possible, but varieties adapted to humid weather are needed, which are not very popular in the international market.

With the wide distribution of mango trees in most rural areas of West Africa, estimates of production are very hard to assess, which leads to very variable results.

Based on Food and Agriculture Organization Corporate Statistical Database (FAOSTAT) data, but correcting some inaccuracy based on discussion with industry players, we estimated the amplitude of mango production in West Africa (ECOWAS and Mauritania) to be a total production of more 2,380,000 tons of fresh fruits in 2020.

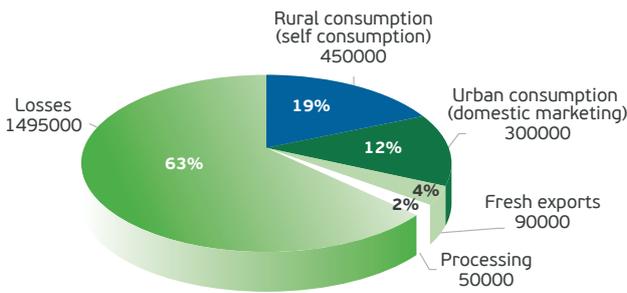
46 <https://www.britannica.com/science/West-African-monsoon>.

47 <http://www.cartographie.ird.fr/pluvio.html>.

Like in many fruit sectors, high yields, a very concentrated production period, large dissemination in the countryside as well as in urban gardens and a few areas specialized in commercial production lead to a structural overproduction during the main mango harvest time. As visible below, it is estimated that at least half of the production in West Africa is not harvested.

High losses are observed in household production and commercial production. In household production, all the fruits are not harvested, while in commercial production, fruits with defaults, insect bites or damage are sorted out during the harvest process.

Figure 11: Estimated destination and uses of ECOWAS mango production (average in 2019-20)



Source: Consultant.

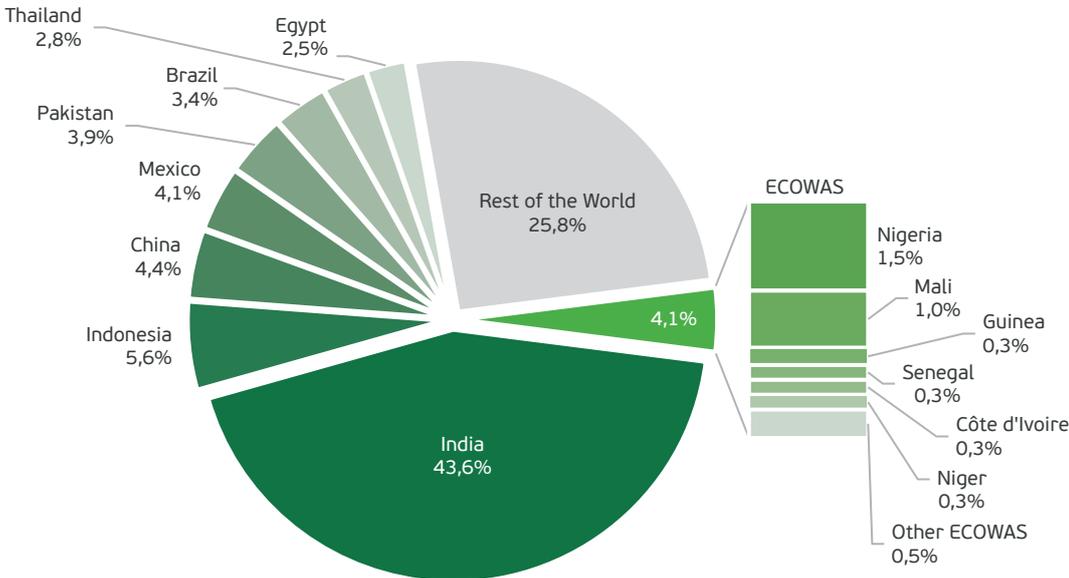
Despite this situation, domestic marketing to supply urban areas and export to the international market remain strong. Approximately 20% of ECOWAS production is marketed, which is equivalent to 440,000 tons of fresh fruits traded every year. This makes mango the second most traded fruit in West Africa, after banana (sweet and plantain).

ECOWAS PRODUCTION AND EXPORT TRENDS IN THE WORLD MARKET

The Food and Agriculture Organization (FAO) estimated world mango production to be 60 million tons in 2019. ECOWAS production is estimated to be 2.38 million tons, accounting for approximately 4% of global production. As visible in Figure 12, mango production is spread across most tropical countries around the world, with a high concentration in Asia, and more particularly in India, which has more than 40% of world production. A few countries with Mediterranean weather (particularly the Kingdom of Spain and the State of Israel) also grow mango, mainly as an export crop.

Figure 12: Share of world mango production by main producing countries

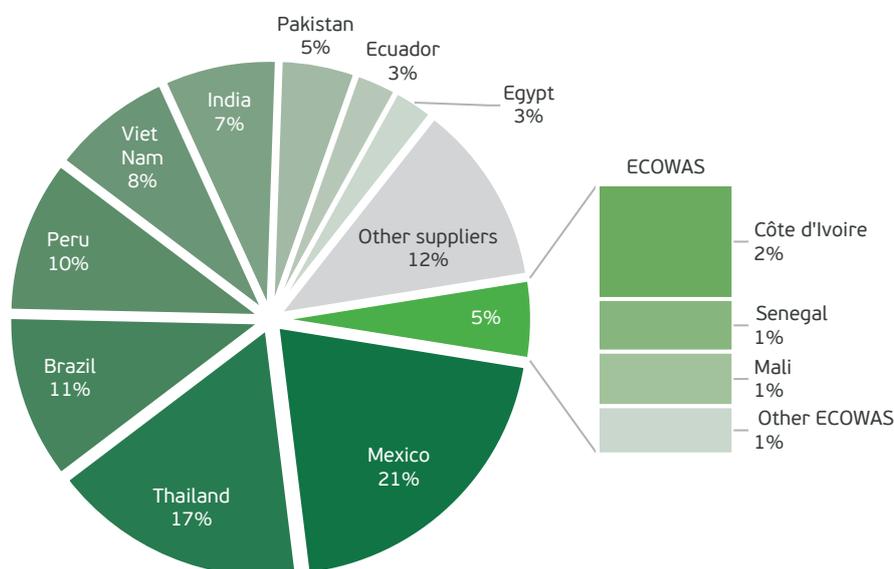
Share of mango production with detail for top 10 producers and ECOWAS
(Source: Consultant based on FAOSTAT corrected with industry information)



Source: Consultant, based on data from the Food and Agriculture Organization Corporate Statistical Database (FAOSTAT), *FruiTrop Magazine* and industry.

Figure 13: Share of world mango trade by main exporters

Market share of the 10 main exporting origins in the global mango market with detail for ECOWAS.



Source: Consultant, based on data from Comtrade, *Fruitrop Magazine* and industry.

However, in most producing countries, like in West Africa, the major part of production is not marketed, even in domestic market. In 2019, international trade of mango was only 2 million tons, or 3.3% of the world production. This is why the most interesting figures to consider before investing in the mango sector are the traded mango data, and not the total production data.

While ECOWAS production represents less than 4% of global production, its market share in the international trade of mango is much bigger, with approximately 5% of the exports of fresh and dry mango.

In 2019, it was the 7th mango-exporting origin worldwide. As is visible in Figure 13, the other biggest exporting origins are located in South America and Asia.

The international mango market is organized around four main poles of consumption, which absorb 80% of the international flow of fresh and dried mango: North America (United States of America, and Canada), Europe (EU 27 and the United Kingdom of Great Britain and Northern Ireland), the People's Republic of China and the Persian Gulf (the Kingdom of Saudi Arabia, the United Arab Emirates, the Sultanate of Oman, the Islamic Republic of Iran, the State of Kuwait, the Kingdom of Bahrein and the State of Qatar).

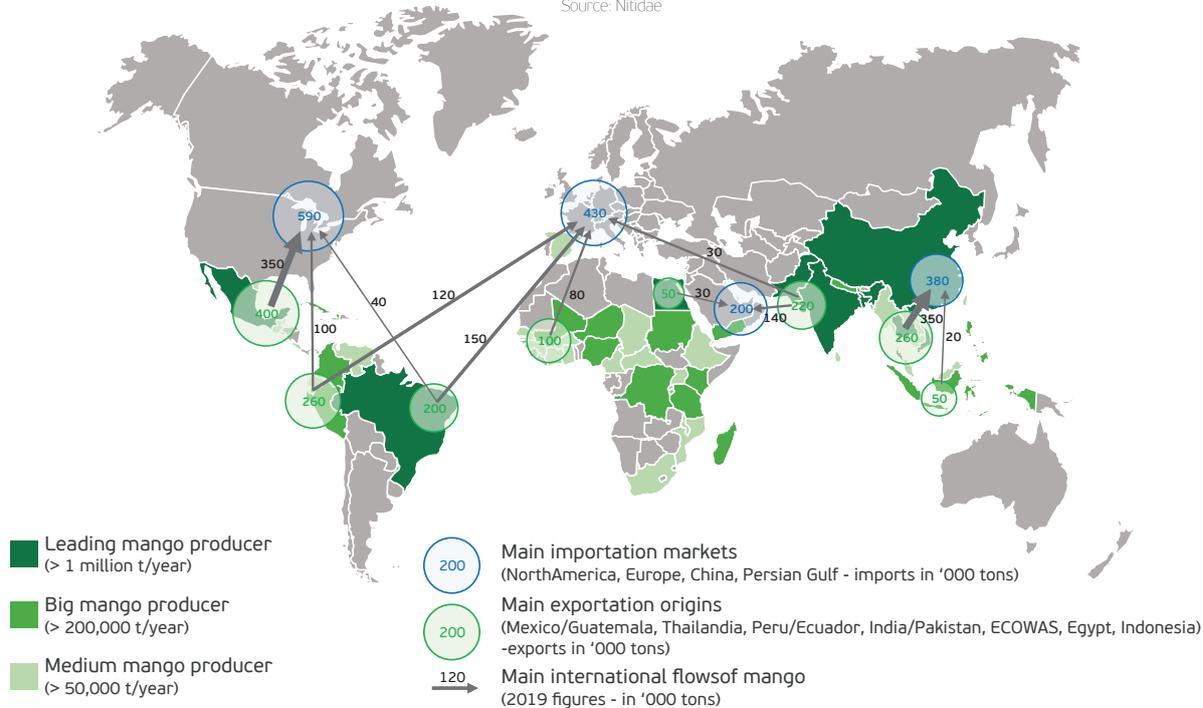
Those main markets are supplied by eight main origin areas exporting more than 50,000 tons of fresh and dried mango every year: Central America (the United Mexican States, the Republic of Nicaragua and the Republic of Costa Rica), the Kingdom of Thailand, the Republic of Ecuador and the Republic of Peru, India and the Islamic Republic of Pakistan, the Federative Republic of Brazil, ECOWAS, the Arab Republic of Egypt and the Republic of Indonesia. Smaller origins like Spain, the Dominican Republic, Israel, the Republic of South Africa, the Socialist Republic of Viet Nam and the Republic of the Philippines export 10,000–30,000 tons of their own production every year, but much less in the international market.

The global mango market in 2019 accounted for a little more than 2 million tons of fresh mango exported from producing countries to consuming countries. As visible in Figure 15, global mango trade (excluding re-exportation) grew very fast and continuously in the last 20 years, with an average annual growth of 7.2% (+75,000 tons/year). The growth of ECOWAS mango exports during the same period has been slightly higher, with an average pace of +8.3%/year (+4,500 tons/year). ECOWAS' market share of global trade went up from 4.2% in 1999 to 5.1% in 2020.

Figure 14: International mango trade

The international mangomarketin 2019
Main origin, destination and flowsof freshand driedmango

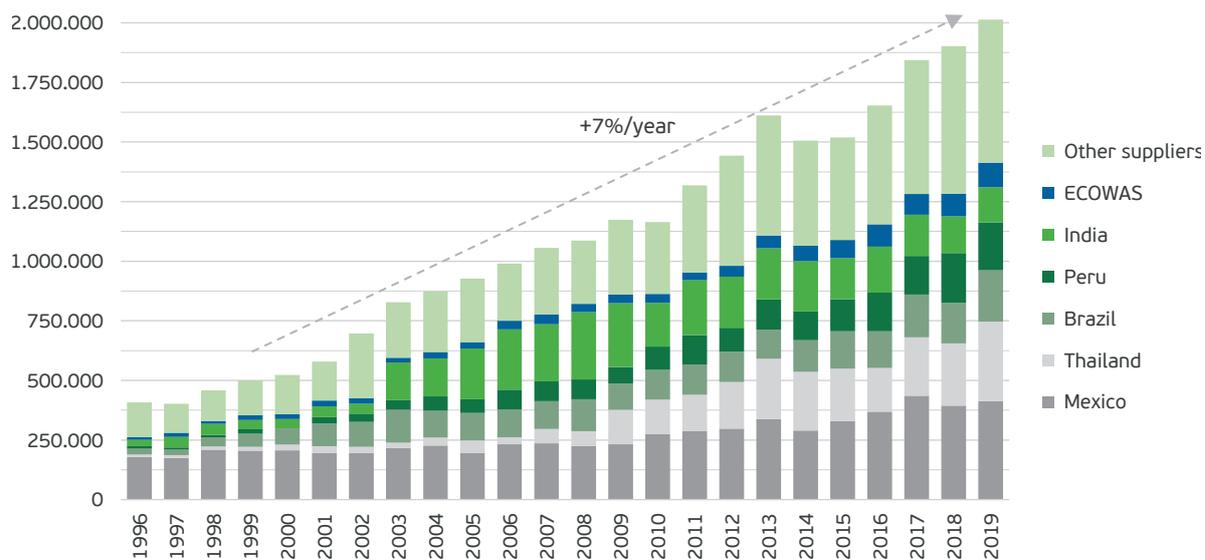
Source: Nitidae



Source: Consultant, based on Trade Map and *FruiTrop Magazine* data.

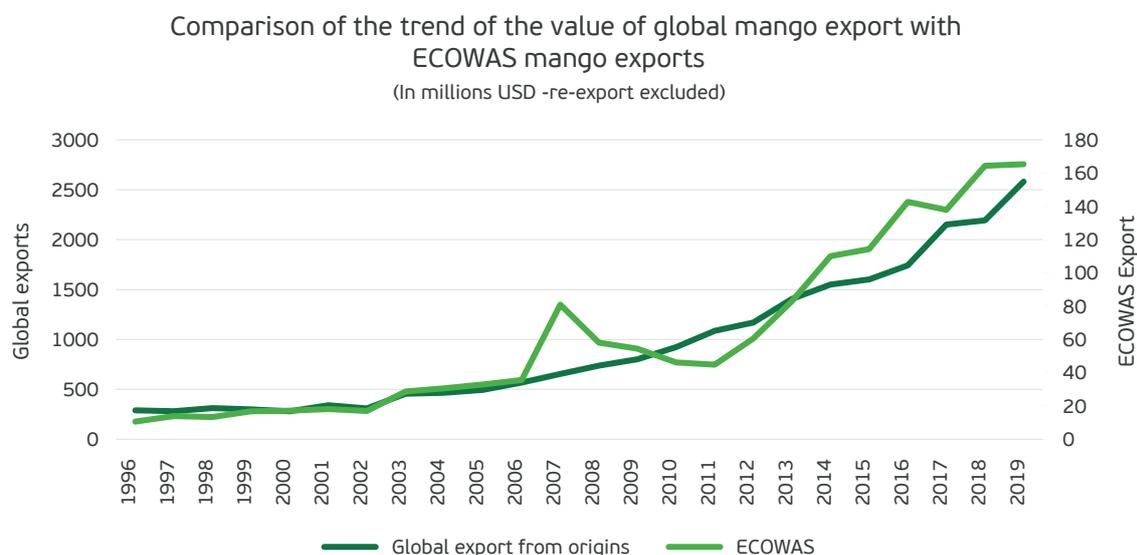
Figure 15: World mango trade and market share of ECOWAS among main exporting countries

(In tons -re-export excluded)



Source: Consultant, based on Trade Map.

Figure 16: Evolution of global and ECOWAS mango export values

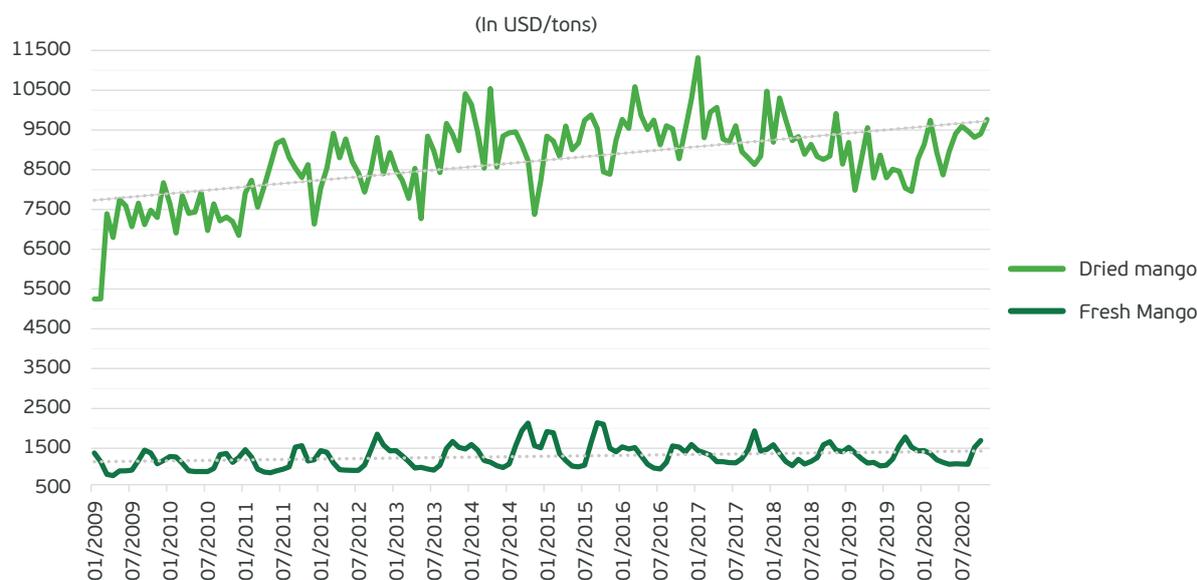


Source: Trade Map.

Another success for ECOWAS is the increase of the value of its exports. Thanks to the development of the mango drying industry (led by Burkina Faso) and the fresh cut industry (led by Ghana), the annual value of exports grew by an average of 12%/year in 1999–2019 reaching more than \$165 million. This growth has been stronger than the growth of the global mango market, which surpassed \$2,600 billion in 2019 from \$300 million in 1999, equivalent to an average of +11%/year in the period.

As is visible in Figure 17, in the last 10 years, all mango prices tended to increase, but prices of dried mango in the international market tended to increase faster in the long term than prices of fresh mango. Local processing is a way to increase value addition and take advantage of another growing trend.

Figure 17: Comparison of fresh and dry mango prices (CIF, USA)

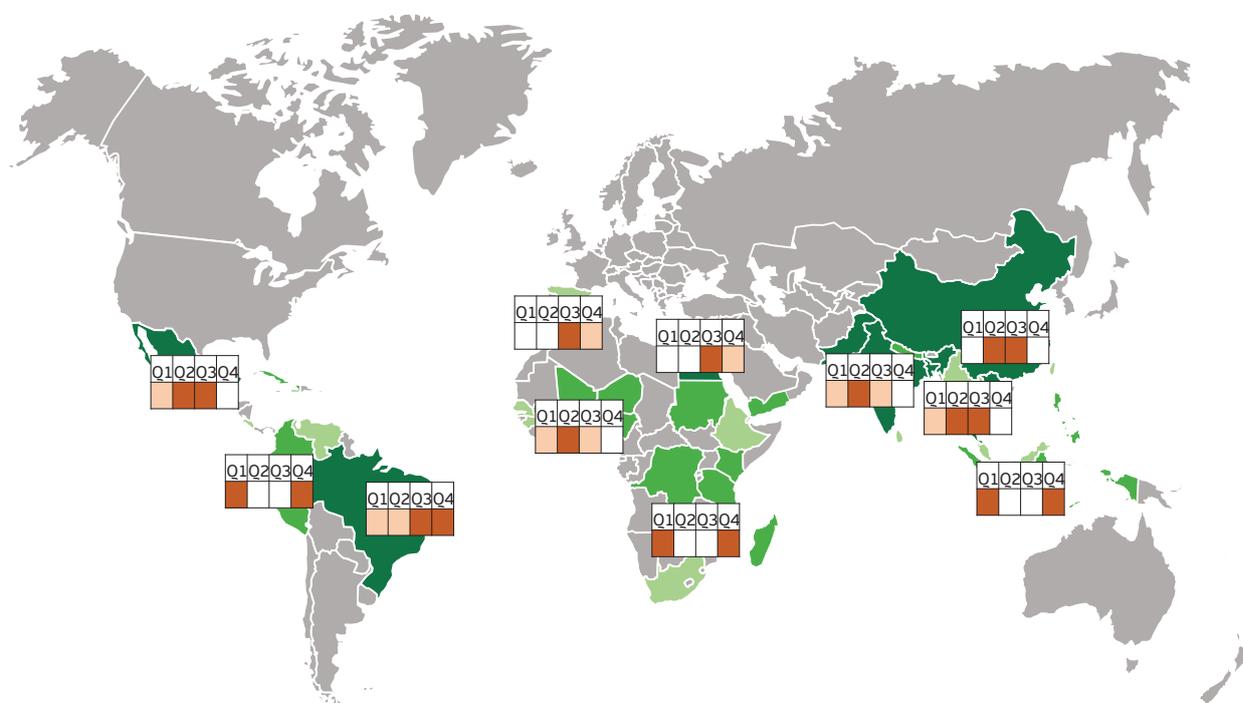


Source: Consultant, based on US Customs data.

Figure 18: Worldwide mapping of mango production calendar

Map of mango production calendar by quarter in main producing and exporting countries

Main harvest period in **dark orange** –early/late harvest period in **light orange**



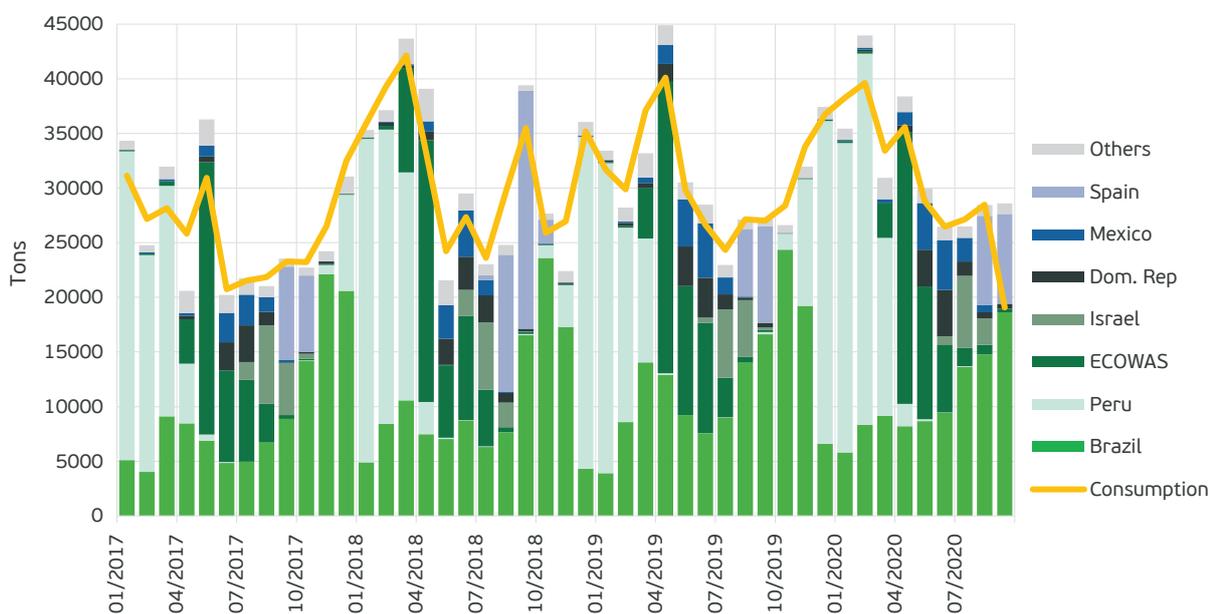
Source: Consultant – based on expert knowledge, confirmed by *Fruitrop Magazine* crop calendars and monthly exports reported by customs at origin.

Finally, it is important to consider the opportunities for ECOWAS production in terms of production calendar. As visible in Figure 18, ECOWAS production is mainly concentrated in the second quarter of the year, with few competitors on the European market during this period, as the other big producers at this time of the year (Mexico and India) are further from Europe.

ECOWAS mango dominates the European market in April and May (Figure 19).⁴⁸ This period corresponds to a peak of demand for tropical fruits, as the domestic autumn fruits (apple and pear) are almost exhausted while the summer fruits (peach, apricot, strawberries and cherries, etc.) are not yet available.

48 The map in Figure 18 shows the production period. The table on Spain is for Spanish production (coming after ECOWAS on the EU market).

Figure 19: Monthly supply and demand of mango in the EU market



Source: Consultant, based on Eurostat data.



2.2. STRATEGIC ACTIVITIES AND SUBSECTORS FOR INVESTMENT

EXPORT OF FRESH MANGO: KEYS TO SUCCESS

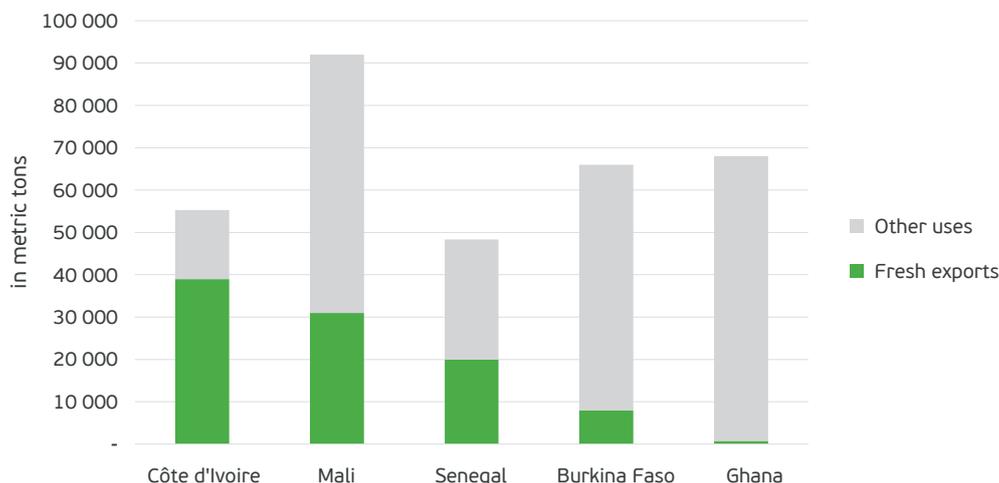
The main subsector of the mango value chain in terms of value is the export of fresh mango. As described previously, most of the commercial production of fresh mango in ECOWAS countries is destined for fresh consumption. Export of fresh mango out of West Africa experiences continuous growth due to a dynamic international demand (+7.2%/year = +75,000 tons/year in the past 20 years).

Côte d'Ivoire is the leader in the fresh exports of mango in ECOWAS, with approximately 39,000 tons exported, representing more than 70% of its marketed production (Figure 20). Indeed, Côte d'Ivoire seems specialized in fresh exports compared to other ECOWAS countries, where this use represents only 40% (Senegal and Mali), or lower than 10% (Burkina Faso and Ghana).

Figure 20: Shares of fresh exports among mango uses in main exporting countries

Share of fresh export of mango over total marketed production per ECOWAS country in 2020

(source: country profiles)



Source: Chart produced by the consultant based on industry interviews and custom data from Trade Map.

The domestic market can be considered as a complementary/secondary market, but not as a major opportunity due to the generalized overproduction, which leads to a market saturation every year, especially during harvesting period. However, regional markets can be interesting outlets for off-standard mangoes. Indeed, mango-processing countries such as Ghana or Burkina Faso import a minor, but significant part of Côte d'Ivoire's exported mangoes (15%), and it can go as high as 50% for Mali.

The first option for an investor interested in export of fresh mango is to only invest in trade, buying existing supply from small and medium farmers (bigger farmers are generally exporting themselves or are already bound by contract to an exporter). The second is to invest in a big mango plantation to directly manage production. Both options can be combined, which could make the business even more profitable and less risky.



For the export of fresh mango, the key successful aspects are quality management, transport time and coordination.

Quality is the most challenging aspect. Insect infestations regularly lead to rejections of whole containers of fresh mango, resulting in high losses for exporters. Spotted, rotten or discoloured mangoes also lead to price reduction after delivery. Any quality issue will reduce prices for the lot delivered, as well as for future deliveries: reputation about quality consistency is hard to acquire and easy to lose. Like in most fruit sectors, mastering quality before and during marketing is the main factor of success or failure. To mitigate this risk, there are several levels of control that can be monitored:

- At harvest level: With qualified employees and adapted tools (if the investor is a stakeholder of a commercial plantation), or with regular technical assistance to capacitate smallholders (if the investor only buys from outgrowers).

- At selection level: Calibration of the mangoes must be well mastered, with trained and qualified buyers who can identify farmers who will deliver a consistent quality.
- At handling and packaging level: Beyond qualification of employees, which is essential at this level, the key is the quality and good maintenance of infrastructure (cold storage, etc.).

Transport timing and coordination of export with clients as well as with other exporters are another key aspect of the fresh mango business. Mango being a perishable product, importers and wholesalers at the destination aim to regulate the flow to avoid any loss, quality decrease or variation of stock. National export infrastructure and road networks must be adapted and well maintained. This explains the leading position of Côte d'Ivoire, which can provide export services at a satisfactory level.

FOCUS ON A SUCCESS CASE IN FRESH EXPORT OF MANGO: SCS INTERNATIONAL IN MALI

SCS International, established in 2007, is a producer and exporter of fresh mangoes (mainly the Kent variety) by sea or air to the Netherlands, the French Republic, the Kingdom of Belgium, the Federal Republic of Germany, the United Kingdom, Spain and the Gabonese Republic and by land to Morocco between March and June. The firm grew from exporting 22 tons in 2007 to 1,500 tons in 2016.

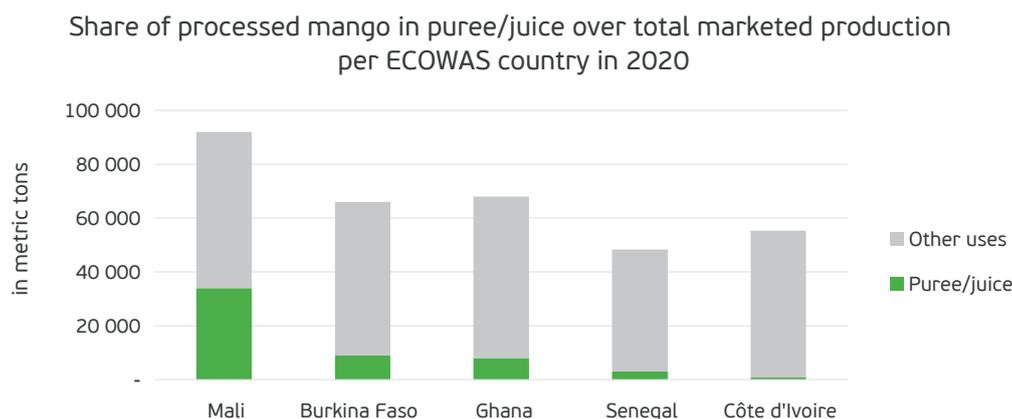
SCS International's mango supply comes from producers organized in cooperatives across Sikasso, Bamako and Koulikoro. The orchards are certified by European auditors who perform annual inspections. To maintain its certifications, the company trains producers in its supply network in the reconversion and rejuvenation of their old orchards to increase their yields from 5 tons to 10 tons per ha. Furthermore, they promote integrated management and good agricultural practices to depend less on the use of chemical fertilizers. In recent years, the company has raised money and invested in various projects:

- Vertical integration by the acquisition and plantation of 50 ha. With the installation of a drip irrigation system, the yield is expected to reach up to 40 tons per ha;
- Diversification of exported products with 4 hectares of horticulture, also irrigated by drip irrigation to enable year-round production of peppers, okra and sweet peppers;
- Integration of packaging production with a facility that began its operations in 2020.

MANGO PUREE AND JUICE

The mango puree and juices subsector is a dynamic part of mango market. Indeed, in the leading ECOWAS country, Mali, several companies achieved success in this market (e.g. CEDIAM and ComaFruits), and a lot of new small and medium-sized enterprises (SMEs) are created (e.g. Zabbaan Holding).

Figure 21: Share of mango juice and puree among mango uses in main exporting countries



Source: Chart produced by the consultants based on industry interviews and custom data from Trade Map.

The global demand for tropical fruit juices has been increasing in the past few years. The sweet aromatic taste of mango is a major factor, driving the growth of the mango fruit juice market, and rising health concerns and the amount of nutrition in fruit juices influence market growth. Europe is a major consumer of fruit juices, with more than 20% consumption of mango juice, of which more than 50% is consumed in the United Kingdom. Mango beverages are one of the fastest-growing fruit juice categories, outpacing carbonated drinks in terms of volume growth.⁴⁹

However, the juice market is very competitive, with heavy players such as Pepsi or Coca-Cola flooding the mass market, and numerous other differentiated companies occupying the various niche markets. In order to enter this market, several strategies can be adopted, as well as product diversification, multi-customer-centric, food safety first, certifications, vertical integration and/or productive alliances, attractive packaging and modern branding.

PRODUCT DIVERSIFICATION

Mango puree and concentrate are sold to second transformation industries that will turn them into finished goods; thus, mango puree and concentrate

are raw materials that are considered to be commodities. Second transformation industries are price sensitive and price makers, and consequently will always seek to buy from the lowest bidder. That is why diversification towards other mango products can be relevant. Product diversification is not just limited to mango products; it also extends to growing, processing and exporting other fruits and vegetables. Mango production is seasonal (limiting processing operations to only for four months of the year: April to July), as being able to process other fruits into puree or juices or being able to dry or freeze them is an opportunity to optimize usage rates. For example, for years, the CEDIAM processing line was underused at approximately 36% of its capacity during the mango season and inoperative during the rest of the year.

MULTI-CUSTOMER-CENTRIC

A balanced mix of customers will make an investment more resilient and financially sustainable. There is no doubt that, for now, the EU is the most lucrative market to which Malian exporters and processors have access. That said, the US market is just as interesting (thanks to AGOA), but is not accessible for now, because ECOWAS stakeholders are unable to overcome non-tariff barriers and convince American importers to source from them.

49 Global Mango Juice Market Outlook 2017–2023, Goldstein Research.

FOOD SAFETY FIRST

Food safety is the main non-tariff barrier that ECOWAS stakeholders fail to overcome. This is because local authorities are not rigorous in enforcing national food safety standards and let companies get away with violations. Companies that seek to be competitive will voluntarily comply with at least national standards and at best Hazard Analysis and Critical Control Points (HACCP) principles. Health-focused consumers are willing and able (they often belong to middle-class incomes and higher) to pay more for better-quality products.

CERTIFICATIONS

Certification is a tool that reassures consumers, who are increasingly concerned about the impact of their purchases on local communities and on the environment. Organic, Fairtrade and eco-friendly certifications are criteria that producers use to differentiate themselves from the competition. In fact, supermarkets select foreign suppliers on the basis of certifications. They demand norms and standards be respected to avoid risks of scandals.

VERTICAL INTEGRATION AND/OR PRODUCTIVE ALLIANCES

In most cases, mango stakeholders are interdependent. Mango processors cannot produce organic mango juice if they do not have access to organically grown mangoes. Going forward, if processors and exporters want to ensure quality

control, they should include production in their investment or become formal offtakers of mango planters by signing procurement contracts with them. These contracts should include price fixing mechanisms and, if possible, fair and foreseeable prices, quality standards and minimum order quantity to incentivize farmers to invest in good practices and maintain a high quality of production. Like in the cotton value chain, offtakers can take it a step further by providing technical assistance and inputs on credit, to ensure that farmers can increase their productivity and improve quality. These alliances can be facilitated at the Interprofession Filière Mangu (IFM) level. Offtakers that have a certain financial capacity can vertically integrate and invest in their own orchards, enabling them to control the quality of the products from the farm gate all the way to the consumer's plate.

ATTRACTIVE PACKAGING AND MODERN MARKETING

Food shopping has become an experience for households in developed countries; people are drawn to attractive food products that are well packaged and with distinct branding. Storytelling plays an important role as well; consumers are more sophisticated and interested in the stories of places and people behind the products they purchase. Attractive packaging, modern branding and storytelling are not sufficient – participating in international exhibitions, festivals, concerts and sport events will favour direct contact with consumers, making it possible to record their needs first-hand.

FOCUS ON A SUCCESS CASE IN MANGO JUICE: BLUE SKIES IN GHANA

The company Blue Skies was created in 1997 by British entrepreneurs. It focuses on the production and sale of fresh cuts of fruits, dairy-free fruit ice creams, and natural juices, mainly for the export market (EU), but also for the Ghanaian domestic market. The company is based just outside Northampton in the UK and has production sites in Ghana, Egypt, South Africa, Brazil, Senegal, Cote d'Ivoire and the UK.

Its turnover was more than 100 million pounds in 2019, with a profit of 4 million pounds. It employs more than 4,000 people. Blue Skies sources from more than 150 fruit farmers in Ghana, whom they provide with technical assistance and a strict 60-day payment policy, which is very appreciated by farmers. They also created a foundation to support farmers with community projects. Blue Skies products is GLOBALG.A.P. and LEAF certified, and its processing facility is BRCGS Global Standards for Food Safety certified.

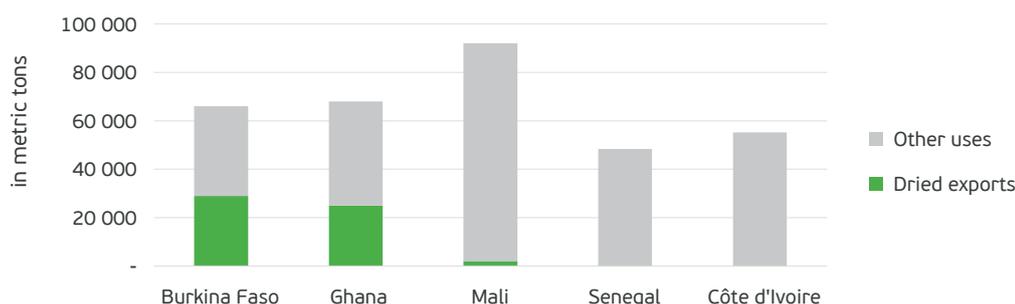
DRIED MANGO

Dried mango is a dynamic subsector with quick growth in specialized ECOWAS countries. Two countries have become hubs for processed dried mangoes: Burkina Faso and Ghana (Figure 22). They both show strong sector development, with new companies and facilities opening every year.

Figure 22: Share of dried mango among mango uses in main exporting countries

Share of processed dried mango over total marketed production per ECOWAS country in 2020

(source: country profiles)

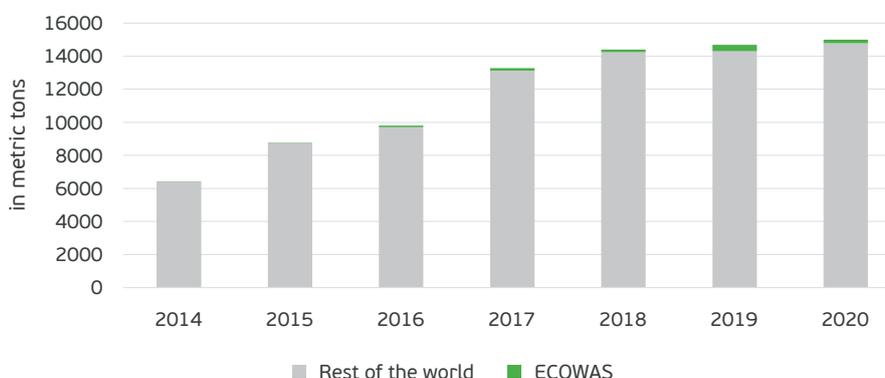


Source: Chart produced by the consultants based on industry interviews and custom data from Trade Map.

Figure 23: Evolution of US imports of dried mangoes

Evolution of US imports of dried mangoes

(Source: US customs)



US Customs.

The dried mango subsector is fuelled by a dynamic demand, quasi exclusively on the export market, led by the EU and the United States. Dried mango imports are steadily increasing in the United States (+20% per year up to 2018) even though they reached a plateau in 2018–20 (+2% per year) (Figure 23). ECOWAS countries have a very small weight in these US imports. Most ECOWAS dried mango production is sold to the EU. It is not possible to isolate dried from fresh mango in EU import data, but the growth of dried imports is known to be

similar to the United States, or even more dynamic, since it shows a steady +5-6% per year evolution.

Ghana and Burkina Faso import fresh mango from the other ECOWAS countries to process and export them as dried mango in their specific markets: the United Kingdom and the Netherlands for Ghana, and Germany and France for Burkina Faso. Accra and Bobo-Dioulasso have become clusters for processed dried mangoes thanks to their rapidly improving infrastructure and network of processing facilities.

The main challenges for dried mango companies are linked to the high competition for raw material, high turnover of qualified employees, lack of market for lower-quality products and maintenance of machinery:

- The shortening of the mango harvesting season in each country due to the fruit fly, and low management of the orchards are creating a supply stress for processing facilities. That is why one key to success is to strengthen supply strategy by developing strong partnerships with producer cooperatives, as well as prospecting towards neighbouring countries with different harvesting periods.
- With the emergence of the dried mango subsector, a lot of opportunities are appearing for qualified middle management or technicians. This is a threat to companies, which can experience high turnover. Securing human resources with incentives and good working conditions can be the only way to mitigate this risk.
- Regarding the lack of market for the 2nd and 3rd quality dried mangoes, the domestic market is not yet a solution. Indeed, local consumption of such processed products is still very low (less than 5% of production in Burkina Faso) since the local populations are not familiar with them. A small increase in consumption can be considered in urban areas, but the Nigerian market should be more prospected.
- Finally, the machinery at the processing facilities is key to the success of a dried mango venture.



Technology is evolving quickly in this sector, but the level of maintenance/repairs does not always increase at the same pace. Hence, a company must select its machinery with scrutiny, and be sure to implement best maintenance routines. Recruitment and continuous training of engineers and technicians is also vital.

One of the difficulties for a new dried mango company can be the acquisition of appropriate land. The factory's location must be very well connected to main routes so that logistics for procurement and export can be efficient and fluent.

FOCUS ON A SUCCESS CASE IN EXPORT OF DRIED MANGO: TIMINI SA IN BURKINA FASO

Timini is a joint venture company created in 2014 in Bobo-Dioulasso between Fruiteq SARL (one of the most experienced exporters of fresh mangoes in Burkina Faso), M-PAK Pty Ltd (one of the largest producers of dried mangoes in South Africa), and Westfalia Fruit (one of the world's largest dried mango and avocado marketers, from South Africa).

Timini is the largest producer of dried mango in Burkina Faso, with two factories and an installed production capacity of 800 tons. Its turnover exceeds 3 million euro, it employs more than 700 people and sources more than 18,000 tons of fresh mangoes from more than 2,000 smallholders.

Some of its products are organic and Fairtrade certified, and its factories are BRCGS Global Standards for Food Safety certified, the most strict industrial quality certification.

ORGANIC AND FAIRTRADE MANGO

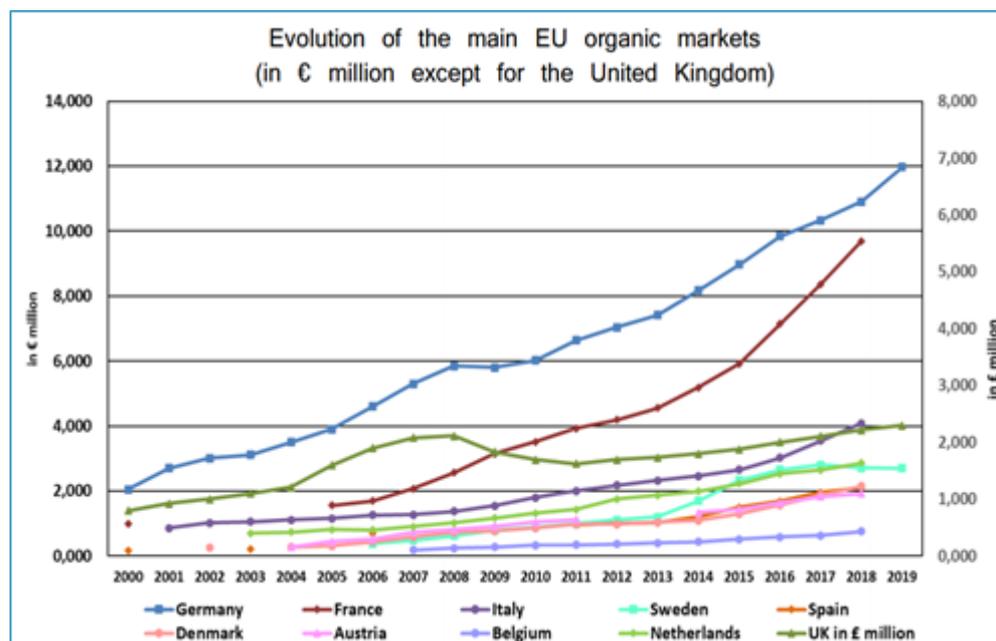
The large majority of the market for certified mango is the export market, especially for the EU and the United States. Hence, the observations and recommendations made previously for the fresh mango export are also, and even more, relevant to certified mangoes.

ORGANIC

The most dynamic market for certified mango is the organic certification. In Europe, which is the 2nd main consuming region after North America (40% of the total retail sales⁵⁰), the total organic market represented approximately €40 billion in 2019, and is growing by more than 10% yearly.⁵¹ Germany and France are leading this trend of consumption (Figure 24). Mango is the 2nd most consumed organic certified fruit in Europe after banana, with 8% of the total volume of tropical fruits imported.

Among ECOWAS countries, the leader in organic production is Burkina Faso, whose national certified surface is increasing by +40% yearly (Figure 25). In 2nd position is Côte d'Ivoire, which has a slower, but more constant yearly conversion rate. If we focus on the area certified as organic for mango, Burkina Faso is clearly in the lead, with approximately 5,000 ha in 2019. The other countries are far behind, with 800 ha for Ghana and 1,600 ha for Mali. However, the areas vary from one year to another. The most striking example is Burkina Faso, which went from 10,000 ha in 2018 to 5,000 ha in 2019. Thus, maintaining the certification is also a tremendous challenge.

Figure 24: Evolution of organic markets in Europe

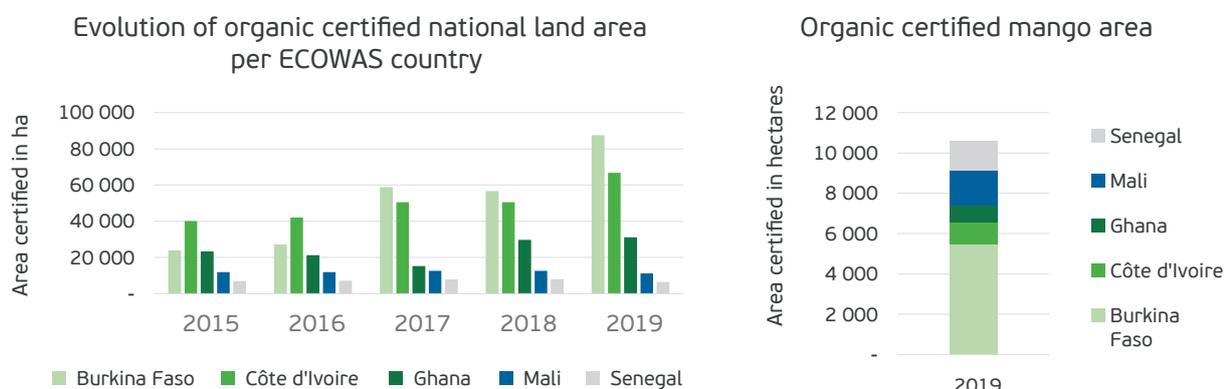


Source: French Agency for Development and Promotion of Organic Farming.

50 Research Institute of Organic Agriculture (FiBL) statistics for 2018.

51 Organic farming and market in the European Union, Agence BIO, 2019.

Figure 25: Total certified organic and organic mango acreages in some ECOWAS countries



Source: Research Institute of Organic Agriculture (FiBL).

FAIRTRADE

The other market for certified products is Fairtrade. The total Fairtrade market is approximately 10 times smaller than the organic one, representing €10 billion in total world retail sales, with a yearly growth of approximately 8% since 2015.⁵² Approximately 62 million tons (without banana) of tropical fruits are produced and sold globally, with mango being in first place.

The market for certification is clearly interesting and in quick growth, especially for tropical fruits like mango. Although there is a lack of supply, the issue can be avoided by acquiring land and producing mango on a commercial scale. Investors should, however, take into account that organic production is more complicated than conventional production and entails high technical risks. Investing in organic mango production needs to rely on highly skilled technicians/agronomists with experience in organic tree farming. Organic production necessitates fertility management and pest control using technical/innovative processes that are not commonly available or mastered in most mango production areas.

Aside from organic certification, Fairtrade certification is not accessible to company owned farms, as Fairtrade labels are only intended for small and medium independent farmers.

The other possibility, which is the most adopted one, is to source mangoes from smallholders. However, the availability of certified mangoes in ECOWAS countries is very low, and most certified producers

are already bound to companies that probably supported them in the certification process.

For these reasons, investors wanting to target the organic and Fairtrade mango sector must consider investing in farmer organizations identification, training and contracting, including paying/prefunding the certification of the cooperative to guarantee at least a part of their procurement. Setting up an outgrowing scheme with small and medium farmers could be based on existing farmer organizations already involved in other crops commonly associated with mango in the mango production areas, such as cotton, cashew, hibiscus and/or grains. Farmer organizations already structured around the production and marketing of other products will often be interested in diversifying their activities/crops and benefit from a trading/contracting experience. They are generally more efficient than ad hoc farmer organizations created for mango production, as their members are already used to working together and doing common marketing of their production.

One of the main keys for success for a company that targets the certification market is to partner with a farmer organization that already has enough seniority to handle a certification process. Another key for success is to add as much value as possible to the certified mango products, meaning that processed products such as dried mango or puree/juice should be prioritized. Also, note that demand for certified products is more developed for processed products.

⁵² Fairtrade International, Statista.

FOCUS ON A SUCCESS CASE IN CERTIFIED MANGO PRODUCTS: COMPAGNIE MALIENNE DE FRUITS – COMAFRUILTS IN MALI

ComaFruits was created in 2009 by an Italian entrepreneur and a Malian engineer. Today, it runs two factories, one in Bonoua, Ivory Coast, and one in Selingué, 200 km south of Bamako, in Mali. Their products are mainly frozen cubes and dried mangoes, but they recently received a capital increase from a European investment fund to diversify towards juices. Their strategy is to move towards certified value-added products. They already source from a reliable network of 1,000 smallholders that they intend to increase to 3,000. Their close relationship with farmer organizations allowed ComaFruits to develop organic and Fair for Life certification with them. The company supports the cooperatives in implementing the procedures, and provides technical assistance to farmers to promote best agricultural practices.



2.3. KEY POINTS FOR SUCCESSFUL INVESTMENT

DIVERSIFY PROCUREMENT AND MARKETS

Any investment in the mango sector should consider diversification as a key to success. Due to a short production period in all mango production areas worldwide, perishability of the fruit and risks inherent to any agribusiness investment, the concentration of procurement on one simple production area or focusing marketing on one single market are not suitable strategies for the middle and long term.

On the production side, it is strategic to work with large farms and small-scale farmers in outgrowing schemes. While large farms will ensure a better management of pest control and quality during harvest and post-harvest processes, outgrowing with smallholders will enable a reduction in capital and operational expenditures, spreading the harvesting/marketing period by weeks and improvement of weather resilience.

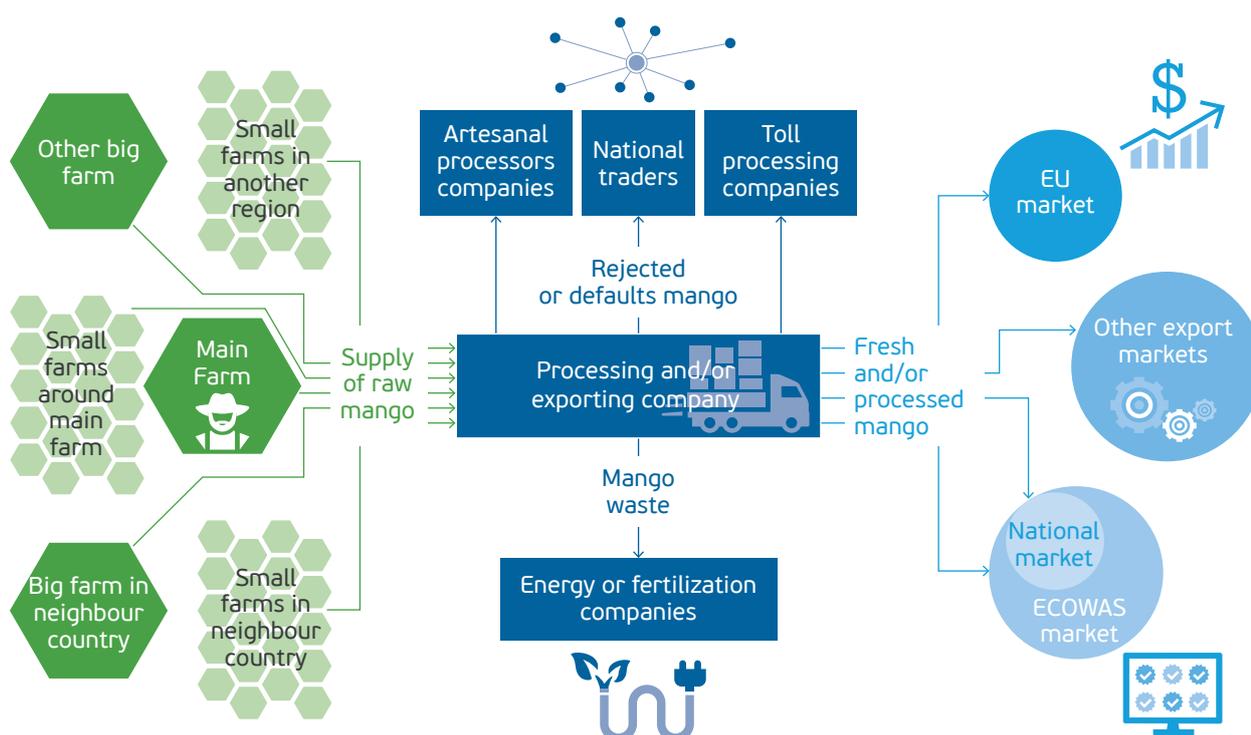
Large farms can also be used as training centres to show good practices to smallholder farmers, and the same technicians working on the large farm during the peak of work (cleaning and harvesting time) can play the role of trainers and technical advisers for small farmers during the less busy months.

While relying on only large farms can be costly and risky, having no big farm owned or contractually linked to trading/processing companies can limit the security of procurement in terms of quality control and capacity to innovate in cultivation and harvesting practices. Having a presence throughout the year in the production areas can lead individual farmers to trust a client more and to respect their commitments, and diversification is also important to limit the exposition to risk.

Export logistics to a particular market can be affected by events and unbalances in the transport market, affecting sales flow and generating losses. Having a use or market for rejected mango will increase the profitability of any investment in the mango sector.

So far, export markets out of Africa have been the leading markets for fresh and processed products. In the next decade, ECOWAS is expected to be one of the most dynamic developing markets, and developing brands and processed products dedicated to the subregion is the best way to take advantage of the long-term trends to improve the resilience and profitability of businesses based on export.

Figure 26: Diversification strategies in the mango value chain



Several experiences, particularly in Burkina Faso and Ghana, showed that valorization of by-product and rejected fruits by artisanal or semi-industrial processors located around the main processing facilities can generate competitive ecosystems with a toll processor network, adding value to the main/biggest activity.

Even if one particular supplier or client seems the most adapted to one specific business, it is important to always keep in mind that, in risky agricultural value chains, it is always better to be diversified.

INVEST IN QUALITY

Like for any agricultural product, quality management is one of the keys to success in the mango sector.

With several fruit flies attacking mango in Africa, quality needs to be preserved from production, and with strict controls all along the value chain to limit losses during conservation and transport and, therefore, containers rejections.

▪ NATIONAL STANDARDS (NOT MANDATORY)

Mandatory sector compliances vary depending on each ECOWAS country. The list of specific requirements by country can be seen in Figure 27.

Figure 27: National standard for mango trading and processing in ECOWAS countries

COUNTRY	National standard	Technical regulations to access international market	Specifications
BENIN	No existing and applied standards	No technical regulations	No specifications
BURKINA FASO	NBF-01-026: 2009; Recommended Code of Practice NBF 01-0312009; Mango juice NBF 01-038-2009; Mango nectar	CBF 01-07:2016, NBF Certification Mark (mango jam) CBF 01-11:2016, NBF Certification Mark (mango juice) CBF 01-13:2016, NBF Certification Mark (dried mango) CBF 01-15:2016, NBF Certification Mark (mango nectar)	No specifications
CABO VERDE	NCV 015:2016 – Standard of Quality for Mango	No technical regulations No health regulations	No specifications
	NI 163 1993: Specifications for Fresh Mango NOR 32: 1989: Fresh Fruit and Vegetables Sampling	No technical regulations	
THE GAMBIA	GAMS ISO 14001: 2004: Environmental Management System – Requirements with guidance for use ISO 22000 GAMS: 2005: Food Safety Management System – Requirements for any organization in the food chain GAMS CAC/RCP 1-1969: Gambian Standard on Food Hygiene GAMS CODEX STAN 1-1985: Gambian Standard for the Labeling of Prepackaged Food GAMS CAC/RCP 44-1995: Code of Practice for Packaging and Transport of Fresh Fruits and Vegetables ECOSTAND Standard for Mangoes	No technical regulations	NONE

GUINEA	NG 02 – 01 – 003/2013/Codex stan. 184-1993 (mangoes) Specifications NG 02 – 01 – 012/ 2013: Codex stan. 247-2005 (fruit nectar) NG 02 – 01 – 012/ 2013: Codex stan. 247-2005 (fruit juice)	Regulation C/REG.21/11/10 of 26 November 2010 harmonizing the structural framework and operational rules for plants, animals and food safety in the ECOWAS area	Technical guidelines for good post-harvest practices and good packaging practices for export mango developed by PRODEFIMA
GUINEA BISSAU	ECOWAS STAND (no national standards) Standard 023:2014 – Fresh mango Standard 028:2014 – Code of Good Practice for Organic Products Standard 021:2014 – Fruit juices and Nectars Standard 029:2014 – Code of Practice for Organic Products	No national technical regulation	Guide on the processing procedures of small agrifood units in Guinea-Bissau, 2015
LIBERIA	Fresh mango standard being adopted	No national technical regulation	NONE
MALI	MN 02-01/003 Mango – refrigerated storage	No technical regulations	Specifications on fresh mango for export.
	MN 02-01/005 Fruits & vegetables maturing after refrigerated storage		Specifications for trackers (harvesters)
	MN 02-01/031 Fresh fruit and vegetables – arrangement of parallelepipedic packaging in land transportation vehicles		Self-inspection guide
	ECOSTAND standard on mangoes (ECOWAS harmonized standard)		
	ECOSTAND 052 General Principles on Food Hygiene (ECOWAS Standard)		
	MN02-01/026 fruit juice and nectar		
	ECOSTAND 021 fruit juice and nectar (ECOWAS harmonized standard) No environmental standards		
MAURITANIA	NONE	NONE	NONE
NIGER	No existing and applied standards	No technical regulations	No specifications
NIGERIA	NOT PROVIDED	NOT PROVIDED	NOT PROVIDED
SENEGAL	CODEX Standard 184 1993 for mango	Regulation EC 430/2006 Decree No. 68-507	SENEGAL Quality specifications for MANGO EXPORT
	General Standard for Labelling Prepackaged Foods CODEX STAN 1-1985.		
	ECOWAS Standard NS ECOSTAND 023: 2014: Mangoes	Decree No. 68-508	
	Specifications	ISO 22000	
	Senegalese Standard NS 03-096 – 2009 for mango juice and nectars		
	Standard CODEX STAN 247-2005 Codex General Standard for Juices and Nectars		
SIERRA LEONE	SLS 6: 2014: fruit nectar SLS 63: 2014: fruit juices	No technical regulations	NONE
TOGO	TGN ISO 22522: Crop protection equipment – Farm-level measurement of spraying distribution for fruit trees and shrubs	ISO 6660: Mangoes – Refrigerated storage	NOT AVAILABLE
	TGN ISO 9898: Crop protection equipment – Test methods for air-blast sprayers for fruit shrubs and trees		
	TGN ARS 54: Recommended Hygiene Practices for Canned Fruits and Vegetables		
	CXS 160-1987: Standards for mango chutney		

Source: Identification of Needs for Strengthening the Quality Infrastructure in the Mango Value Chain. UNIDO, WACOMP 2020

▪ INTERNATIONAL STANDARDS

Export of fresh and processed mango need important investments in quality control to be successful.

Pricing and ability to negotiate advantageous contractual terms with clients abroad are often strongly based on reputation and guarantees of quality of the product delivered.

Main quality certifications: GLOBALG.A.P. for fresh mango, HACCP, ISO 22000 and BRCGS Global Standards for Food Safety for processed products, as

well as other social and environmental standards are fully described in the WACOMP report *Identification of Needs for Strengthening the Quality Infrastructure in the Mango Value Chain*. Table 8, extracted from this report, summarizes the main voluntary standards and certifications for export of fresh and processed mango.

The highest quality standards lead to the highest value addition. Quality is not only a challenge to access markets, it is also an opportunity to get premiums.

Table 8: Mango sector: Summary of quality requirements, standards and technical regulations

Commodity	Quality Requirements	Standards	Technical regulations	Technical committees/ Owner
Fresh mango	SPECIFICATIONS: Merchantability, labelling, packaging; pallets processing	National Standard International Standard for Fruit and Vegetables: Mango Standard codex stan 184-1993 ISPM 07; 10 & 15		Technical Committee Agriculture of the NONs OCDE CODEX
	Best Agricultural Practices, Hygiene and Safety, Traceability, Environment, Health, Social and Worker Safety, Maximum pesticide Residue Limits	GLOBALGAP ▪ IFA; ▪ GRASP; ▪ NURTURE; ▪ ALBERT HEIN. RAINFOREST ALLIANCE	Regulations (EC) 178/2002 and 852/2004	FOOD PLUS UE RAINFOREST ALLIANCE
	Health, social and safety of workers	BSCI FAIR FOR LIFE KAUFLAND SOCIAL STANDARD SMETA		Large distributors and private organisations in Europe
	Organic Farming	BIO	Regulation (EU) 2018/848	UE
Dried mango	Food Safety Technical specifications	National Standard; HACCP; ISO 22000; FSSC 22000; IFS; BRC UNECE DDP 25	Regulations (EC) 178/2002 and 852/2004	CODEX A. ISO EU
Mango juice	Food Safety Technical specifications	National Standard; HACCP; ISO 22000 CODEX STAN 149-1985 CODEX STAN 161-1989	Regulations (EC) 178/2002 and 852/2004	CODEX A. ISO
Mango puree	Food Safety Technical specifications	HACCP ISO 22000	Regulations (EC) 178/2002 and 852/2004	CODEX A. ISO
Mango nectar	Food Safety Technical specifications	HACCP ISO 22000	Regulations (EC) 178/2002 and 852/2004	CODEX A. ISO

Source: *Identification of Needs for Strengthening the Quality Infrastructure in the Mango Value Chain*. United Nations Industrial Development Organization (UNIDO), WACOMP programme, May 2020.

▪ FOCUS ON FOOD SAFETY CERTIFICATION⁵³

While food safety certification is not mandatory under European legislation, most established European importers will require some type of food safety certification.

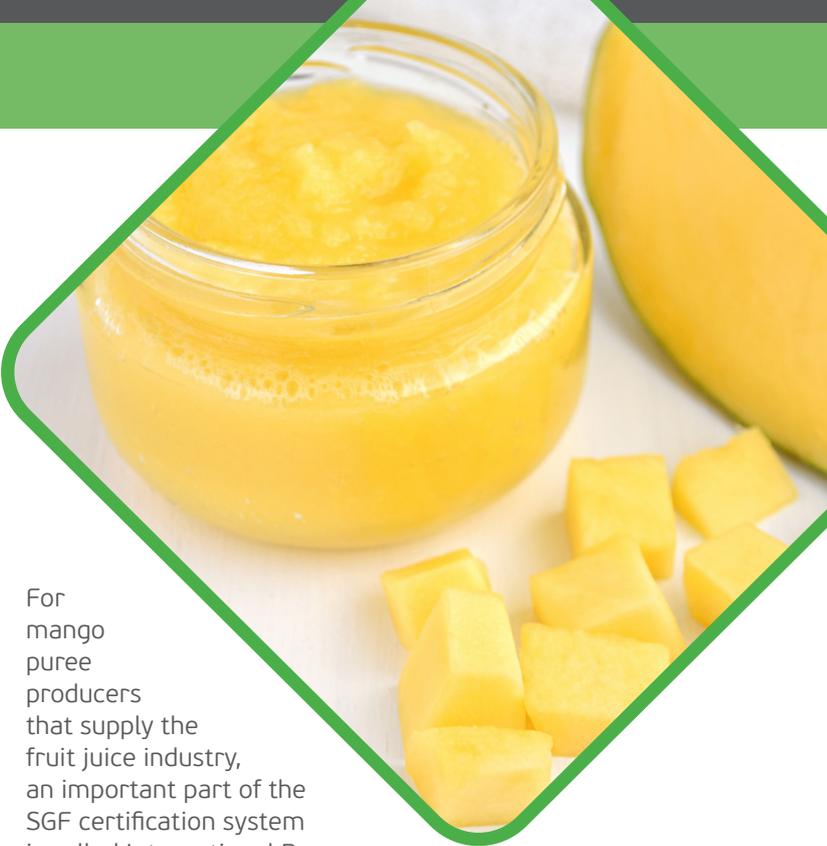
Most European buyers will ask for certification recognized by the Global Food Safety Initiative (GFSI).⁵⁴ For mango puree, the most popular certification programmes, recognized by the GFSI, are:

- International Featured Standards (IFS);⁵⁵
- BRCGS Global Standards for Food Safety;⁵⁶
- Food Safety System Certification (FSSC 22000).⁵⁷

This list is not exhaustive and food certification systems are constantly under development. Most food safety certification programmes are based on existing International Organization for Standardization (ISO) standards like ISO 22000.⁵⁸

Although different food safety certification systems are based on similar principles, some buyers could prefer one system in particular. For example, British buyers often require BRCGS Global Standards for Food Safety, while IFS is more common for German retailers. It should also be noted that food safety certification is only a basis from which to start exporting to Europe. Serious buyers will usually visit/audit your production facilities within the first few years of your cooperation.

In the fruit juice industry, the most recent development is SGF certification,⁵⁹ which is aimed at increasing safety, quality and fair competition in the fruit juice sector through industrial self-regulation. SGF certifies fruit processing companies, packers and bottlers, and traders and brokers for fruit juices, as well as transport companies and cold stores in almost 60 countries worldwide.



For mango puree producers that supply the fruit juice industry, an important part of the SGF certification system is called International Raw Material Assurance (IRMA).⁶⁰ For companies in the fruit juice industry that want to control the whole supply chain, the ideal situation would look like this: farmers are GlobalG.A.P.⁶¹ certified, fruit processors are IRMA certified and juice bottlers are certified by the (International Quality Control System (IQCS) for juices and nectars).⁶² IRMA certification is also applicable to traders/brokers, transport companies, producers of semi-finished products and storage facilities, in addition to fruit processors.

A processor with ISO 22000 or BRCGS Global Standards for Food Safety certification will get, on average, a 10%–15% premium in comparison with the price of a processor that has just the HACCP certification. Organic certification provides an average premium of +30% in comparison with conventional mangoes.

Investing in quality provides a strong return on investment, both in the short and middle term. It is also the best way to reach new clients/diversify and to improve negotiating power.

53 Source: Centre for the Promotion of Imports (CBI) (2021). 'Entering the European market for mango puree'.

54 Source: The Consumer Goods Forum. See <http://www.mygfsi.com/>.

55 Source: International Featured Standards (IFS). See <https://www.ifs-certification.com/index.php/en/>.

56 Source: BRCGS. See <https://www.brcglobalstandards.com/>.

57 Source: Foundation FSSC. See <http://www.fssc22000.com/documents/home.xml?lang=en>.

58 Source: International Organization for Standardization (ISO). See <https://www.iso.org/iso-22000-food-safety-management.html>.

59 Source: SGF. See <https://www.sgf.org/>.

60 Source: <https://www.sgf.org/voluntary-control-system/processing>.

61 Source: GLOBALG.A.P. See https://www.globalgap.org/uk_en/.

62 Source: <https://www.sgf.org/voluntary-control-system/bottler>.

2.4. REGIONAL INVESTMENT OPPORTUNITIES

The ECOWAS region represents a market of 350 million consumers with an average net income per capita over USD 1,350/year in 2019⁶³ and a growing middle class with a purchase power over USD 10,000/year.

Given the size of this market, the mango sector in the ECOWAS offers a number of regional opportunities, especially in the trade of traditional processed products (dry mango, mango juice, mango slices) as well as innovative food products valorising mango as an ingredient or a flavour agent (biscuits, sweets, sausage, ready-to-eat meals, etc.)

ECOWAS' middle class is attracted by new products mixing tradition (mango being the most traditional fruit of the region), innovation and modern packaging. Common packaging and food safety standards, as well as free-trading inside ECOWAS allow food processors located in ECOWAS countries to have access to a major and rapidly growing regional market. A growing number of food companies producing in one ECOWAS member country are exporting to the rest of the zone, using regional marketing strategies that target the 350 million consumers in the ECOWAS community.

As presented in the country profiles below, several examples of sub-regional procurement and sub-regional marketing exist in ECOWAS.

Several mango processors in Mali, Burkina, Ghana and Côte d'Ivoire buy mango in neighbouring countries to spread their procurement period. Senegalese and Ivoirian fresh export companies also improve their procurement/marketing period by sourcing mangoes in Mali, Burkina Faso and Ghana. As the mango harvest period is slightly different in each West African country, accessing mango in several production areas may help to increase the procurement period by 15 days to 1 month.

On the commercialization side, several brands of mango/fruit juices like Dafani (Burkina Faso), Ivoirio (Côte d'Ivoire), Comarfruits (Mali) or Présséa (Senegal) have an increased established presence in several other West African countries. Most of those brands experience an even faster growth in the regional market than in their national markets.

This is why investments in logistic, processing, valorisation of by-products and/or distribution must be thought at the regional scale and not only at the national scale. Building regional brands and communication centring around the "West African origin" are opportunities to take advantage of a growing and promising trend in a huge regional market.

63 <https://data.worldbank.org/indicator/NY.ADJ.NNTY.PC.CD>

3. COUNTRY PROFILES OF THE FIVE MAIN MANGO-EXPORTING COUNTRIES IN ECOWAS

3.1. CÔTE D'IVOIRE

COUNTRY OVERVIEW

Cote d'Ivoire, formerly known as the Ivory Coast, is a tropical country located in the southern, coastal West African subregion, on the Gulf of Guinea, and bordered by Mali, Burkina Faso, Liberia, Guinea and Ghana. It is a transition zone between the humid and rainy equatorial climate that characterizes the southern part of the country and the dry tropical climate of the north, with average annual temperatures of 24°C–28°C.

A single-party rule, which was accompanied by political and social stability, existed until 1990. After the ensuing two decades of multiple political parties that were marred with violence, the country has become an increasingly stable presidential democracy. The population is scattered across 31 regions or provinces, with important metropolitan areas such as Abidjan, the capital, Yamoussoukro, Man, San-Pédro or Korhogo dubbed by the World Bank as global, subregional and domestic connectors.⁶⁴ The cultural setting is diverse, with more than 60 different ethnic and tribal groups, the most dominant being the Baoulé (23% of the population). The country's openness and hospitality, combined with a prosperous economy, have contributed to attracting a large number of African immigrant workers, mostly from neighbouring Guinea, Ghana and Burkina Faso, as well as a strong community of Lebanese expatriates. Together, these workers are estimated to represent nearly 20% of the country's population, contributing to the vibrancy of the economy and the social life.

Cote d'Ivoire – key facts	
Capital city	Abidjan
Area	322 463 km ²
Population, total	25.7 million
0–14 years	41.7%
15–65 years	55.4%
Youth literacy (15–24 years)	58.4%
Male (%)	63.8%
Female (%)	53%
GDP (nominal, USD billion, 2019)	\$58.8 billion
GDP growth (real, 2014–19)	7.4%
FDI, inflows	\$1.0 billion
Gross domestic private investment	\$10.9 billion
Employment to population ratio (+15years)	55.1%
Employment to population ratio (15–24 years)	32.8%
Exports of goods and services (G&S), 2014–19 (USD billion, 2019)	23.5% of GDP (13.9)
Main exported products	Cocoa; mineral fuels and oils; edible fruit and nuts
Imports of G&S, 2014–19 (USD billion, 2019)	22.1% of GDP (13.2)
Main imported products	Mineral fuels and oils; cereals; vehicles
Inflation, 2014–19 (2019)	0.38% (-1.11%)
Bank credit to private sector	19.6% of GDP
Gov. expenditure	\$10.2 billion
Gov. revenue	\$8.3 billion
Total public debt	\$22.2 billion
Currency	XOF (XOF)
Language	French (official), Agni, Baoule, Mande, Senofu

Note: Data for most recent years is shown.

Source: World Bank, International Monetary Fund (IMF), UNCTAD and Comtrade.

64 Throughout the text, 'subregion' refers to West Africa (ECOWAS), while 'region' refers to the whole continent.

A COMPETITIVE AND INNOVATIVE ECONOMY

The economy is the 118th most competitive economy in the world, 14th in Africa, and 5th in West Africa, according to the 2019 World Economic Forum's Global Competitiveness Index.⁶⁵ This relatively strong position is explained by macroeconomic stability (1st in the subregion), as suggested by the low inflation and low public debt (see key facts table), in addition to the quality of its infrastructure network, the extent of ICT adoption, the large market size and strong business dynamism, in which the country comes 3rd in the subregion.

The country ranks 112th globally, 15th in Africa and 4th in the subregion according to the Global Innovation Index (co-published by Cornell University, Institut Européen d'Administration des Affaires (INSEAD) and the World Intellectual Property Organization). The overall index is 21.2/100. The contributing factors to this relatively strong innovative drive are the extent of market sophistication (ranked 1st in the subregion), high-quality institutions (2nd) and the quality of knowledge and technology outputs (3rd).

STRONG INSTITUTIONS

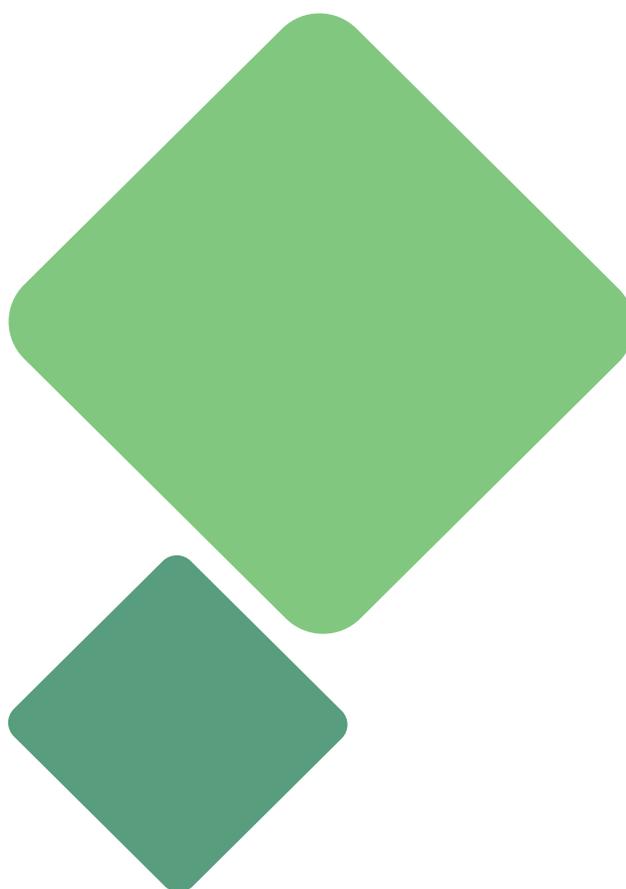
When it comes to political institutions, the World Bank ranks the country 139th globally, 19th in Africa and 8th in West Africa. Regulatory quality and government effectiveness are the country's most advanced component elements, with 4th and 5th positions in the subregion.

HIGH-QUALITY INFRASTRUCTURE

The Africa Infrastructure Development Index of the African Development Bank, headquartered in Abidjan, positions the country 21st in Africa, and 5th in the subregion for the level of development of its infrastructure, with an overall score of 24.2/100. This position is mostly driven by the highly developed ICT and energy infrastructure. Furthermore, the World Bank rates the country's logistics system 50th globally, with a score of 3.08/5. It is the 2nd most performant in Africa, behind South Africa. It even tops Africa's ranking when it comes to the competence and quality of logistics services.

STRONG INVESTMENT POTENTIALS

When it comes to the ranking of the Market Potentials Index developed by the Michigan State University's International Business Center, Cote d'Ivoire tops the list in West Africa. It comes 3rd in Africa (with the Republic of Tunisia), and 69th worldwide. This is mainly due to its relatively large market size, strong market growth and market intensity, and its relatively low country risk.



65 The most recent editions of this and next rankings are used.

INVESTING AND DOING BUSINESS IN COTE D'IVOIRE

FASTEST-GROWING ECONOMY IN WEST AFRICA, 2ND IN AFRICA

Cote d'Ivoire grew at an average rate of 7.4% in the last five years, as indicated in the key facts table. It is the largest economy, GDP-wise, in French-speaking West Africa, 3rd in the whole subregion, behind Nigeria and Ghana, and 8th in Africa. Growth has been mainly driven by the dynamism of the manufacturing and services sectors, as well as the strong performance of the agricultural and international trade sector. The ongoing pandemic has slowed growth to 1.8% in 2020, down from an initially projected rate of 6.7%, according to the IMF, as a result of 'a temporary drop in consumption, stagnating investment, and slower growth in net exports', as well as some disruption in the supply chains and labour market. It is expected that robust domestic demand and stable exports will drive the country's economic recovery in 2021 when growth is projected by the IMF to reach 6%.

RELATIVELY LOW COST OF DOING BUSINESS AND FRIENDLY ENVIRONMENT

The economy's dynamism has been a key driver for FDI inflows, which topped \$1 billion in 2019, the third largest in West Africa. An additional driving factor is the conduciveness of its business environment.

Starting a business in Cote d'Ivoire (outside the SEZ) requires only four procedures (the 2nd lowest in Africa):

- (1) Open a bank account and deposit the minimum capital at the bank (at least XOF 25,000, or \$62, which corresponds to the minimum for a *Société à Responsabilité Limitée* – SARL, or limited liability company); alternatively, the start-up capital can be deposited with a notary against a statement certifying the deposit;
- (2) Register at the one-stop shop (*Centre de Promotion des Investissements en Cote d'Ivoire* – CEPICI), which also involves formalities with the commercial registrar (*Régistre du Commerce et du Crédit Immobilier*), the tax authority (*Direction générale des Impôts*), and the social security institute (*Caisse Nationale de Prévoyance Sociale*); afterwards, the company can request the publication of the legal notice of incorporation, which is done on the CPICI website (<http://www.cepici.gouv.ci/>);
- (3) Obtain a company seal at any seal maker;
- (4) Notify the local tax authority (*Centre des Impôts*) of the company's address.

All of these procedures can take up to six days, with corresponding fees amounting to XOF 25,000 (\$45.5).

Additionally, **registering property**, either for commercial or residential use, would take up to 39 days, at a cost averaging 7.1% of the property value. Investors considering a construction project typically obtain a **permit** within 163 days, with 22 procedures and fees amounting to 5.9% of the total costs.

Equality of treatment is guaranteed to all investors, foreign and national alike, when it comes to all business-related formalities.

Labour force is relatively large, with 8.5 million participants, representing 33.2% of the total population. Of this active population, employment is 55.1%. Human capital, the productivity level of a typical worker allowed by their actual education and health, is estimated at 0.37 by the World Bank. Minimum wage is approximately XOF 60,000 (\$109.1) per month, mostly paid to low-skilled workers. A typical worker earns between XOF 85,300 (\$155.1) per month (lowest average) and XOF 1,500,000 (\$2,727.3) (highest average; actual maximum salary is higher), depending on the skills and industries.

Furthermore, when it comes to foreign labour, visa rules are very accommodating, as expatriates outside ECOWAS obtain a duration of stay corresponding to the business or employment duration, with no ceiling or limits, while those from the subregion receive national treatment.

Energy is among the cheapest in the subregion, with XOF 69.3 (\$0.12) per kWh of electricity. It can be obtained within 53 days (approximately half the African average). Two-thirds of the population has access to electricity, the supply of which is considered among the most reliable in Africa, and its tariff index is among the most predictable in the continent.

As part of the construction permit procedure, a **water** connection request is submitted free of charge to the *Société de Distribution d'Eau de la Cote d'Ivoire* (SODECI), which undertakes an inspection within a week of receipt of the request. Obtaining water usually occurs seven days after the payment of XOF 130,000 (\$2,363.6) is made. On average, the variable tariff escalates from \$0.53 to \$0.73 and \$0.86 per cubic metre for total monthly consumption thresholds of 15, 50 and 150 cubic metres respectively.

When it comes to **physical infrastructure**, the country possesses a well-developed road network, the second-largest port in West Africa, a modern airport with a national airline carrier (Air Cote d'Ivoire) that serves all of the major capital cities in the subregion,

and a transnational railway network with more than 1,260 km of metre-gauge track between Abidjan and Ouagadougou. As part of a modernization project agreed between Cote d'Ivoire and Burkina Faso in July 2019 (postponed due to the COVID-19 pandemic), the railway will add significant capacity, going from 800,000 to 5 million tons of freight per year, and 200,000 to 800,000 passengers per year.

The **tax system** is also relatively attractive. The number of payments per year is the lowest in the subregion (just 25 per year). Overall, businesses are expected to pay total taxes and contributions that represent 50.1% of profits. Profits are taxed at a rate of 8.8%, the 6th lowest in sub-Saharan Africa. Payroll taxes are levied at 2.8% for local employees and 12% for expatriate employees on the total taxable remuneration, which includes salaries and benefits, both monetary and in kind, irrespective of the level and skills. Social security contributions are 2%–5% (work injury) to 7.7% (retirement pension). A real estate tax is imposed at 1.5% for undeveloped land, 4% on land revenue, and 11% on developed land, or 15% when the built property is used by the company itself, while the rate is reduced to 4% for unoccupied buildings. All individual income is pooled and subject to a general income tax that ranges from 2% (less than XOF 2.2 million or \$4,000 per year) to a maximum of 36% (XOF 50 million or \$90,909.1).

Value-added taxes are 18% for most sales, and reduced rates apply to specific products such as milk, infant food and equipment for solar energy, all being taxed at 9%.

Customs duties are governed by the ECOWAS common external tariff (CET), in place since 1 January 2015. Imported commodities fall into one of the five tariff bands: essential social goods, such as medicines (0%); goods of primary necessity, raw goods and capital goods (5%); intermediate goods and inputs (10%); final consumption goods or finished goods (20%); and specific goods for economic development (35%). The CET is accompanied by various measures aimed at protecting some industries and guaranteeing fair competition throughout the liberalized subregional markets. They include safeguard measures, anti-dumping measures, anti-subsidy and countervailing measures, and supplementary protection measures.

The **banking and financial system** is very accommodating. It comprises 27 banks of national, continental and international reach (up to 2018), a large number of microfinance institutions (some 211 in 2016) and a **subregional stock market** (*Bourse Régionale des Valeurs Mobilières*). With a regulatory capital-to-risk weighted asset of 10.9%

and an interest rate on loans averaging 7.7%, the banking system is relatively sound and stable, and is accommodating when it comes to accompanying investors, domestic and foreign alike.

The credit availability coverage ratio is the largest in West Africa, with 22% of adults benefitting from loans. In addition, the depth of credit information is greater in Cote d'Ivoire than anywhere else in Africa.

The system is also open to **foreign capital and transactions**, to the extent that international money and capital transfers are relatively free, and FDI companies (and any other private companies and individuals) can indeed hold foreign currency bank accounts.

The **fixed exchange rate** of the common currency (common to eight countries that make up the WAEMU) against the euro is €1 = XOF 655.96. Its fluctuation against the USD reflects that of the euro against the USD, and in the last five years, it has ranged between XOF 520 (26 January 2018) and XOF 627.6 per USD (16 February 2016).

The *Centre de Promotion des Investissements en Cote d'Ivoire* (CEPICI) is the body in charge of promoting investment and the business environment in the country. Investors, both national and foreign, can also benefit from a host of services and fiscal incentives provided by the country's only special economic zone (SEZ), located in the city of Grand-Bassam. The Technology Park of Grand Bassam hosts companies engaged in biotechnology or ICT, and approval must be obtained from CEPICI. Incentives include 0% customs duty, 0% VAT rate and 0% tax on commercial and industrial profits for the first five years of operations, followed by a 1% rate with the possibility of a tax credit.

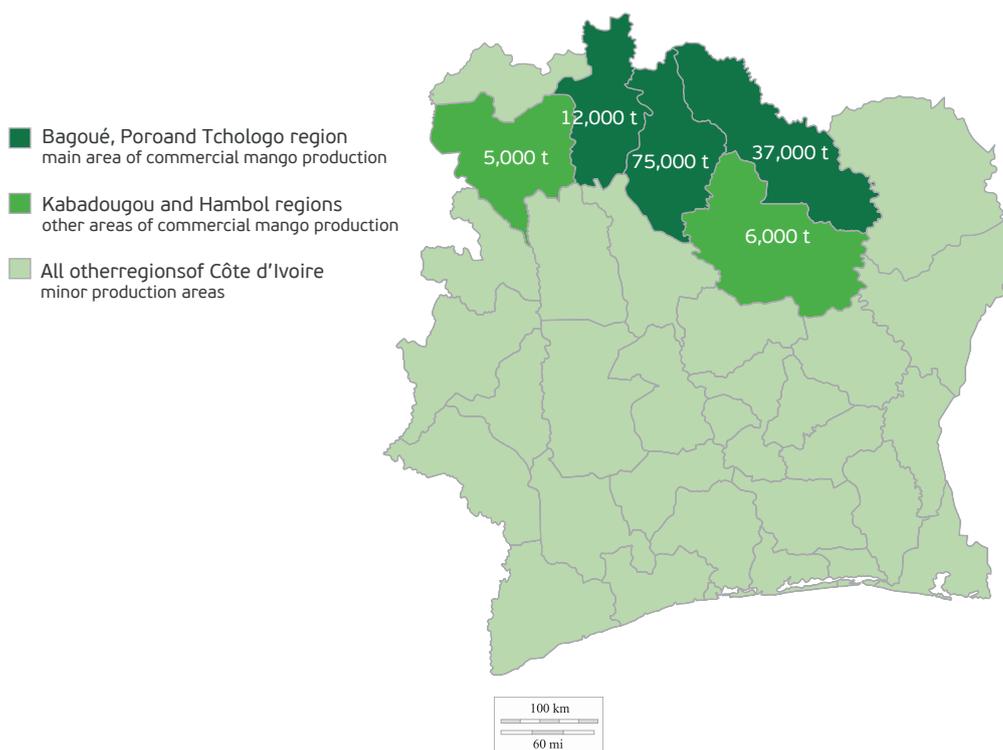
A new cross-border SEZ is under development, located in Sikasso (Mali), Korhogo (Côte d'Ivoire) and Bobo-Dioulasso (Burkina Faso) – the SKBo triangle. It is part of the ECOWAS Cross-Border Initiatives Programme launched in 2005, aimed to increase cooperation frameworks along intra-community borders. If operationalized with a clear legal framework, this uniquely exclusive SEZ will provide additional fiscal advantages for domestic and foreign companies that decide to invest in prioritized sectors such as agribusiness and mining.

Overall, Cote d'Ivoire's business environment has matured substantially in the last decade. The economy's strong dynamism, the increasingly stable political and social environment, the friendliness of the legal and regulatory framework, and the readily available high-quality, low-cost inputs are among key factors that make Cote d'Ivoire a favourable destination for foreign investment.

MANGO IN CÔTE D'IVOIRE: AN OVERVIEW

Côte d'Ivoire is the largest mango exporter in West Africa. The country has built a strong tropical fruit sector, with exportation of three main fruits: banana, pineapple and mango. In 2020, Abidjan was the only port in West Africa with a dock dedicated to fruit exportation, with two berths of 350 metres, cold stores, and stocks of reefers through which 250,000 tons of fresh fruits are exported every year.

Figure 28: Mango production by region in Côte d'Ivoire



Source: Consultants, based on industry interviews.

Mango cultivation is spread all over the country, but commercial production is concentrated in the northern regions. According to the Interprofessional Fund for Agricultural Research and Advisory Services (FIRCA), which supports the sector, Ivorian mango production is approximately 150,000 tons, and data from the industry and the Food Products Marketing Assistance Office (OCPV) has the marketed production at slightly higher than 55,000 tons in 2020. Quantities of mango marketed in Côte D'Ivoire experienced a sharp and continuous growth from the 1990s to 2016. From 2016, they seem to have stabilized, with a strong decrease in 2020 due to the COVID-19 crisis, which slowed the logistic of exports during the mango season.

In comparison with other West African countries, the average size of a mango plantation is larger. Most of the marketed production is carried out by medium-sized farmers with plantations of 4–15 hectares. According to interviews organized during this study, the average size of mango orchards in northern Côte d'Ivoire is 10 ha. Approximately 1,000 ha

among the 20,000 ha of mango plantations identified in the country are bigger plantations of 50 ha to 350 ha, owned by exporting companies. Average yields in medium plantations are 7 tons/ha and yields in exporters' plantations climb from 10 tons/ha to 13 tons/ha.

With the rapid growth of cashew production in northern Côte d'Ivoire from 2010, the plantation of new mango orchards has experienced a slowdown (more than 50% of mango plots are 20+ years old). Nonetheless, the plantation of new orchards never stopped, and many plantations planted in 2000 are still young and will continue producing high quantities of mango during the next decades.

The mango season is from March to July and the main varieties found in Cote d'Ivoire are Kent, Keitt, Amelie and Brooks. The production period is the same in all production areas for the same variety, with the exception of Denguélé, where production is a few weeks later than in other production areas.

The main variety grown in both the medium and big plantations is Kent. Keitt and Amélie varieties are also present in most plantations, and the Brooks variety is cultivated mainly by farmers selling in the local market.

Export and local demands go first for the Kent variety. The Brooks variety is cultivated for its late production, which matches local demand from consumers and processors of dried mango when supply is scarce. The Brooks variety comes in the market in July when fruit flies are already very present: this limits the potential for export, but suits local market needs. The Keitt variety is making a comeback in farms with the growth of dried mango sector: its late production ensures that dried mango processors will have raw materials when other varieties are scarce.

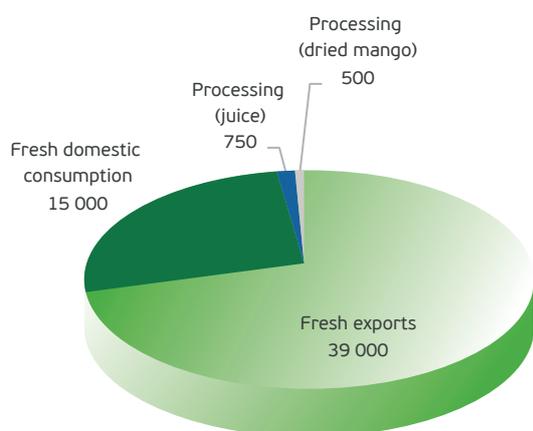
The main outlets for the mango sector in Côte d'Ivoire are fresh mango exports, and fresh mango for the national market. Mango processing remains limited, but is increasing, as local mango stakeholders agree that the mango sector development and survival relies on mango processing, especially dried mango and juice.

The fresh mango export campaign goes from early April to the end of May. Putting aside the strong decrease in 2020 due to the pandemic (35,050 tons), fresh mango exports have been relatively stable in the last years (40,250–40,450 tons/year). European countries are the main destination (32,000–35,500 tons/year or 80%–85% of total fresh mango export), though exports to this destination are decreasing due to quality issues and shipment interceptions at the EU borders.

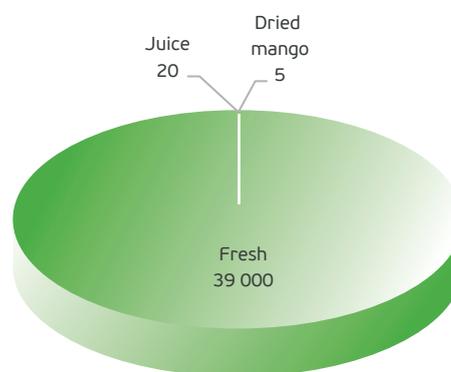
Table 9: Production and export calendar in Côte d'Ivoire													
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
		Export season											
		Production season											
Varieties	Amélie												
	Kent												
	Keitt												
	Brooks												

Figure 29: Production outlets and quantity of exported mango from Côte d'Ivoire (in tons)

Outlets of the marketed production 2019



Exported mango products 2019



Source: Consultant, based on data from the Food Products Marketing Assistance Office (OCPV), customs and industry.

Figure 30: Evolution of Ivorian mango exports by product (2011–20)

Exports of dry, fresh and fresh cut mango from Côte d'Ivoire by main destinations
(in tons)



Source: Consultants, based on data from the ITC Trade Map.

Meanwhile, fresh mango exports to other West African countries have increased from 7,870 tons in 2019 to 8,353 tons in 2020. The main destinations are Ghana, Niger, Burkina Faso and Senegal, with Ghana accounting for the largest share (5,000 tons in 2019 and 5,198 tons in 2020 or 63% of export to West African countries).

The processing sector remains small in comparison to the fresh mango market. However, mango processing has gained momentum in Côte d'Ivoire in the last years, particularly for the dried mango subsector. The dried mango output is still small (295 tons in 2020, 2% of total production), but is increasing fast (+58% compared to 2019). Small-scale and

artisanal units remain the majority, and production is mostly for the international market. The mango puree/juice sector is small in Côte d'Ivoire and is divided between industrial processors, reaching the international market, and semi-artisanal and artisanal processors who sold at the local level. No global production is available for this subsector, but the biggest companies can export 14–30 tons/year of juice.

In 2020, diseases and pest pressure have increasingly grown. While fruit flies remain the main phytosanitary problem, new diseases and pests, such as soft nose, mango seed weevil and mango bacterial black spot, have started to become an issue in some production areas.



MANGO VALUE CHAIN AND STAKEHOLDERS

PRODUCERS

Most mango production is small scale. These producers are organized in 16 mango cooperatives active in the production areas. These cooperatives regroup approximately 3,050 producers. The last census listed 305 individual producers. Large-scale commercial farms are few: there are currently four producer exporters (Ranch du Koba, Vidalkaha, Verger de Bandama, and Centre de Séchage de Farako), with acreages of 50–350 ha (average of 300 ha).

EXPORTERS AND PACK HOUSES

There are currently 39 exporting companies working on fresh mango, of which 14 do not have a packing facility and rely on independent pack houses for their business. There are currently 14 independent pack houses. It is to be noticed that the number of pack houses increased rapidly in the last years, as there were only five pack houses in 2012. Most of them are located in the Poro (29) and Tchologo region (9). Pack houses hire an average of 125 workers (harvest technician and wash-women) during export season. Harvest technicians undertake a first sorting on the mango plots and manage shipment to the conditioning units, where women wash the mango. The Phytosanitary Department of the Ministry of Agriculture and Rural Development (MINADER) service deals with quality control on site.

While exports to the EU market are done with 40-foot reefers, shipments to neighbouring countries are done using 70 kg cardboard boxes or 20 kg racks. Despite high losses of quality at arrival, traders usually opt for cardboard boxes, as it is the cheapest.

Their biggest challenge is access to a cold room during the export season. Some exporting companies rely on refrigerated trucks for cold storage, which might push them to stop conditioning until a refrigerated truck comes from the port.

DRIED MANGO STAKEHOLDERS

Dried mango is relatively new in Côte d'Ivoire, as it started in 2014 under the influence of the Burkinabè processing industry and with FIRCA's support. There are 19 processing units – six with support from the public sector (FIRCA) and 13 from private initiatives. All processing units except one are in the north of the country, where exportable mango is cultivated (8 in Poro, 5 in Tchologo, and 6 in Bagoué, Kabadougou and Sud-Comoé).

Private units are mainly small-scale and artisanal units, with an annual output of 0.1–2 tons/year. Drying is done using artisanal ovens, limiting the capacity to control the drying process and the product's final quality. Some of the private units rely on South African technology. Their output capacity remains low. As they rely on foreign technology, with no spare parts or technician available locally, and with frequent breakdowns, they tend to function poorly. The last category is processing units with several ovens and technicians. They have the biggest processing capacity, of 40–80 tons/year, sometimes reaching 100 tons/year.

More investors are interested in drying mango, as international demand is good and raw material cost is low.

MANGO PUREE/JUICE STAKEHOLDERS

The mango puree/juice sector is very small in Côte d'Ivoire and is divided between industrial processors and semi-artisanal and artisanal processors. There are two industrial processors certified by Côte d'Ivoire Normalisation (CODINORM), SIPRO-CHIM (Darci mango) and ATOU (Ivorio), which produce several types of fruit juices in 300 ml cans. SIPRO-CHIM imports mango puree for its juice, while ATOU buys local fruits. Both companies export their juice to neighbouring countries (Senegal, Burkina Faso and Niger). Mango juice export data is not available, but a company such as ATOU exported 14–39 tons/year in 2015–20. Some other processing companies in the juice business are considering investing in the mango juice sector (Canaan Foods Industries, Afrique Jus, and ComaFruits).

Semi-artisanal and artisanal processors (COFRUNO, Boissons d'Afrik, PURE, and Coopérative COBEKO) have a limited production that is strictly for the local market, as they cannot comply with sanitary norms for export. They lack financial and technical means to expand their juice production.

MANGO STONE BUTTER EXTRACTION

Since 2020, there is a new unit for butter extraction from mango stone, used for cosmetics, and 50 tons of mango stone were bought in 2020. Farm gate price is XOF15 /kg and the processing unit purchase price is XOF 5/kg.

ORGANIZATIONS

Producer cooperatives are grouped in three unions (UPMACI⁶⁶, UCPMCI⁶⁷ and UTMACI⁶⁸) and one federation (FEPROMACI⁶⁹). Exporting companies and traders have their own organizations (AREXMA⁷⁰, OCAB⁷¹ and OBAM-CI⁷²) and conditioning units (UCCMI⁷³). All these organizations are headed by the Inter-Mangue, the mango inter-profession association that comprises a producers' board, traders' board and processors' board.

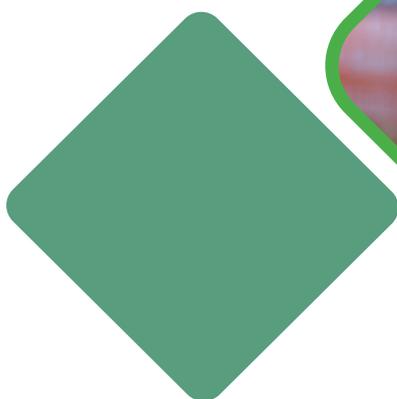
STORAGE FACILITIES

At the port, all reefers are connected to the electricity grid to maintain the appropriate storing temperature.

TRANSPORTATION NETWORKS

Road infrastructure in Côte d'Ivoire is reasonably good, and fresh mangoes from northern production areas are sent to Abidjan by refrigerated trucks or via Ferkessédougou by train.

Abidjan's autonomous port has a special quay for fruit export and Abidjan's international airport, Félix Houphouët-Boigny, is also equipped with infrastructure suitable for fruit export.



66 Union des producteurs de Mangue de Côte d'Ivoire.

67 Union des Coopératives des Producteurs de Mangues de Côte d'Ivoire.

68 Union des Transformateurs de Mangue de Côte d'Ivoire.

69 Fédération des Producteurs de Mangues de Côte d'Ivoire.

70 Association Régionale des Exportateurs de Mangues.

71 Organisation Centrale des Producteurs Exportateurs d'Ananas et de Bananes.

72 Organisation des Producteurs-Exportateurs de bananes, d'Ananas, de Mangues et autres Fruits de Côte d'Ivoire.

73 Union des Centres de Conditionnement de Mangues de Côte d'Ivoire.

INVESTING IN MANGO IN CÔTE D'IVOIRE: KEY FIGURES



Input supply

Number of mango plant nurseries in the country: 1 certified (National Agricultural Research Center of Ivory Coast). There are numerous non-certified nurseries, which are difficult to localize, because they are informal.

Number of suppliers of fertilizer/ phytosanitary treatments within the country: 2 (RMG Ghana Ltd and Callivoire)

Number of suppliers of organic fertilizers/ phytosanitary treatment within the country: 1 (Éléphant Vert)

Number of national manufacturers of mango packaging (cartoons and paper kraft cardboards, etc.): 1 (Filtisac).



Production

Estimated total production: 150,000 tons

Estimated commercial production: 55,000 tons

Number of commercial mango farms (with >1 ha mango orchard): +/- 3,350 farms

Average yield of commercial mango farms: 7 tons/ha (small farms) to 12 tons/ha (big farms)

Farm gate prices (export varieties):
min.: XOF 50/kg; median: XOF 110 /kg;
max.: XOF 125 /kg



Marketing

Distance from main production area to airport: 350 km

Distance from main production area to port: 800 km

Number of available platforms/centres for cleaning/packaging/export: 2 (Ferkessédougou and Abidjan)

Number of exporting companies: 39

Volume of fresh export in 2020: 39,000 tons

Rejection rate in the EU in 2020: 6%



Processing

Share of local processing (on the commercial production): 2.5%

Main process: Juices for local market

Number of industrial processing companies: 1



Investment indicators

Cost of land in rural area:
XOF 100–850 /m² (\$1,800–\$15,500/ha)

Cost of land in urban area (prefecture): XOF 2,000–16,500/m² (\$36,000–\$3,000,000/ha)

Cost of power: XOF 120/kWh (\$0,225//kWh)

Cost of unskilled manpower: +/- XOF 60,000 /month (\$110/month)

Cost of skilled manpower: +/- XOF 150,000 /month (\$275/month)

Cost of transportation:
Ferkessédougou–Abidjan: XOF 78–90/kg (\$2,800–\$3,300/20' reefer container)

Enabling the Business of Agriculture (EBA 2019) score and rank: 45.87 (rank 65/101)

Doing Business (2020) score and rank: 60.7 (rank 110/190)

INVESTMENT OPPORTUNITIES IN CÔTE D'IVOIRE'S MANGO SECTOR

OPPORTUNITY 1: DRY MANGO PROCESSING

With significant production while local processing is still relatively undeveloped, Côte d'Ivoire appears to be a prime location for the establishment of mango drying units. With the possibility of processing mangoes rejected for export, there is potential to benefit from a clear reduction in the costs of collecting and cleaning mangoes. The importance of the production of pineapple, papaya, banana and coconut in the country can also make it possible to diversify the dried fruits and to work throughout the year.

OPPORTUNITY 2: PACKAGING AND EXPORT OF FRESH MANGO

Thanks to the best fruit export terminal in West Africa located in Abidjan port and excellent road infrastructure, mango export is a profitable investment in Côte d'Ivoire. The origin 'Côte d'Ivoire' is also well appreciated in European markets. Even if other exporting companies already work on this market, there is still room for more mango and fruit exporters in Côte d'Ivoire.

OPPORTUNITY 3: PROCESSING OF FRESH MANGO INTO PUREE AND JUICE

With only two companies involved in the industrial juice production, there are still large opportunities for investors to set up modern juice industries in Côte d'Ivoire. The diversity of tropical fruits available, the high productivity of skilled workers and the overall industrial ecosystem of Côte d'Ivoire allow for successful investment in juice production. Abidjan port's fruit dock also includes temperature-controlled work areas that can be used to guarantee a perfect cold chain during the export of frozen mango puree.

INVESTMENT AND MANGO SECTOR SUPPORT STRUCTURES AND PROGRAMMES

The National Agricultural Research Center of Ivory Coast (CNRA) supports players in the mango sector by researching biological control products against fruit flies and supporting producers with small mango trees to facilitate harvesting and high yield. Research is also underway to extend the export campaign from three to six months against two months and to support the renewal of ageing orchards. The CNRA has created a collection of 150 varieties, available at their Lataha research station 10 km from Korhogo.

FIRCA,⁷⁴ through the levies made on the sector, finances agricultural advisory services, research and development of the plant, forestry and animal production sectors. For the mango sector, FIRCA has supported the processing of dried mango by, among other actions, donating six drying units to six producers cooperatives.

The Péléforo Gon Coulibaly University also provides support to the sector through research on the valuation of mango by-products.

The state, through PADFA,⁷⁵ which is financed by IFAD⁷⁶ and OFID,⁷⁷ supported the establishment and recognition of the Inter-Mangue, and financially supported the purchase of products for the phyto treatment of the campaign 2020⁷⁸ against the mango fruit fly to the amount of XOF 1.7 billion for 20,000 ha (using trapping technologies Invader and M3). PADFA plans to support the creation of seven cost-shared drying units, with the largest share borne by the operator. It intends to support 10 existing packaging units for the renewal of their shared-cost technical platform, and the creation of an industrial factory for processing mango juice, nectar and puree. Other plans include the financing of a research programme for products for biological use to fight against the fruit fly, and the georeferencing and measuring of mango plantations in the project area.

74 Fonds interprofessionnel pour la recherche et conseil agricoles.

75 Programme d'appui au développement des filières agricoles (Commodity Value Chain Support Project).

76 International Fund for Agricultural Development.

77 OPEC Fund for International Development.

78 See <https://news.abidjan.net/articles/670044/les-producteurs-de-mangues-de-ferkessedougou-se-forment-aux-techniques-de-lutte-contre-les-mouches-des-fruits>.

PACIR,⁷⁹ linked to the Ministry of Commerce, Industry, and SME Promotion, is carrying out studies to boost the mango processing in Côte d'Ivoire, and provides marketing support to the players in the sector. Other non-governmental organizations, such as HortiFresh, supported by the Netherlands, provide project support in the agricultural sector and support the organization of the mango sector.

The Deutsche Gesellschaft für Internationale Zusammenarbeit's (GIZ) and the Federation of the German Export Trade (BDEX) support in the marketing of horticultural products.

In addition, certain private actors, in particular manufacturers and distributors of phytosanitary products, support the sector by providing products (Maxipousse, Vertimec, Callomil, Karmex, Cypercal and Pyrical, etc.) for the fight against pests, and foliar fertilizers (Callifert and others).

The only subregional cooperation project in existence to develop the mango sector is the Projet de lutte contre les mouches de fruits (PLMF project) to control fruit flies in ECOWAS countries. This is a project that funded the purchase of fruit fly control products for five years in 2015–19 (Bait Success).

Table 10: Investment and mango sector support in Côte d'Ivoire

N°	Institution	Mandate	Contacts	Observations
1	FIRCA	FIRCA mobilizes resources from agricultural sectors, the State and development partners to finance sector development programmes.	Tel.: (+225) 07 08 91 25 94 (+225) 07 09 86 63 35 Fax: (+225) 27 22 52 81 81 E-mail: info-cdg-fadci@firca.ci	
2	Commodity Value Chain Support Project (PADFA)	Improve post-harvest activities (packaging, storage, processing and marketing) of three strategic sectors: rice, vegetables and mango.	Mr. Nanou: Tel.: (+225) 07 57 79 73 91	Support programme to mango sector (among others) funded by IFAD
3	PACIR	PACIR supports the West African integration process and the integration of Côte d'Ivoire into subregional and global trade by adopting structuring measures in well-identified key areas.	Tel.: +225 27 20 30 35 41 E-mail: info@pacir.ci	Support to new investors
4	National Agricultural Research Center of Ivory Coast (CNRA)	National centre for agronomic research	Tel.: (225) 27 23 47 24 24 Fax: (225) 27 23 47 24 11 E-mail: info@cnra.ci	Improved seeds and plants, technical research
5	Phytosanitary Department of the Ministry of Agriculture and Rural Development (MINADER)	It aims to prevent the introduction and spread of pests inside and outside the country.	Tel.: (+225) 27 20 21 43 03 minagri.cabinet@agriculture.gouv.ci cabminagri@yahoo.fr	Issuance of phytosanitary certificate authorizing the export of mango
6	Péléforo Gon Coulibaly University	Innovation for the use of mango by-products for cosmetics, pastry and animal feed. Preservation of the pulp for use in the off season.	Docteur Soro: Tel.: (+225) 05 05 04 79 14 75 Docteur Touré: Tel.: (+225) 07 58 37 65 35	Research on the valorization of mango by-products (Doctor Touré)

SWOT OF CÔTE D'IVOIRE'S MANGO SECTOR

Figure 31: SWOT of Côte d'Ivoire's mango sector

	Mango production	Fresh mango	Dried mango	Juice
Strengths	<ul style="list-style-type: none"> Favourable pedoclimatic conditions Available nurseries 	<ul style="list-style-type: none"> High demand Ivorian mango appreciated in comparison to other origin Location and seasonality for EU market 	<ul style="list-style-type: none"> Can be stored longer (12 and 18 months), good taste, vitamins and multiple uses Growing export demand 	<ul style="list-style-type: none"> Long storage Appreciated by local middle class
Weaknesses	<ul style="list-style-type: none"> No technical supervision Fruit flies and other diseases Ageing orchards Low yields Weak value chain structure Mango processing on a small part of the country's production Limited knowledge of the market 	<ul style="list-style-type: none"> Seasonality and small export season (two months) Low worker qualification Fruit flies Export concentrated on one market (EU) 	<ul style="list-style-type: none"> Raw material seasonality Limited command of the drying process No cold room for storage High investment costs Lack of technicians and spare parts 	<ul style="list-style-type: none"> Raw material seasonality High investment costs Low availability of skilled workers Final product with prices too high for lower classes
Opportunities	<ul style="list-style-type: none"> Growing international demand, including emerging countries Growing processing sector Increasing number of exporting companies 	<ul style="list-style-type: none"> Low-cost raw material Good demand and growing Emerging markets Fruit quay Working road infrastructure 	<ul style="list-style-type: none"> Growing international demand Low-cost labour Raw material available in large quantities 	<ul style="list-style-type: none"> Growing local consumption from middle class
Threats	<ul style="list-style-type: none"> Speculation No treatment against fruit flies 	<ul style="list-style-type: none"> Storage facilities limited No strict quality control Export delay Rigid contract agreement 	<ul style="list-style-type: none"> Low-quality final product Default due to quality 	<ul style="list-style-type: none"> Final product high prices

3.2. SENEGAL

COUNTRY OVERVIEW

Senegal, known as the 'land of hospitality', is the westernmost point of mainland Africa. This coastal hub stands at a crossroads between Africa, Europe and the Americas. It shares borders with Mauritania, Mali, Guinea, Guinea-Bissau and Gambia. As part of the Sahel, its climate is semi-arid, mostly in the north, although there is a rainy season between July and October. Senegal is divided into 14 administrative regions and 45 provinces. Most of the 16.3 million Senegalese (70%) live in the coastal part of the country, with 48% in urban areas. Important cities include Dakar, the capital (home to 23% of the population), Thiès (13.3%), Diourbel (11.1%) and Saint-Louis (6.7%). Saint-Louis, and then Dakar, used to be the economic and political capitals of the French West Africa Colony (*Afrique Occidentale Française*). After gaining independence in 1960, the country went on to become a peaceful and stable presidential republic, with a renowned democratic social and political system. The country prides itself on being one of the oldest and strongest democracies on the continent, with a multiparty system starting in 1975, and fair and free presidential elections have led to two peaceful transitions of power in 2000 and 2012. The cultural setting is rich and diverse. In addition to French, the official language, Senegalese speak 36 languages (that are also associated with ethnic groups), Wolof being the most widely spoken.

Senegal – key facts	
Capital city	Dakar
Area	192,530 km ²
Population, total	16.3 million
0–14 years	42.8%
15–65 years	54.1%
Youth literacy (15–24 years)	69.5%
Male	75.6%
Female	63.5%
GDP (nominal)	\$23.6 billion
GDP growth (real, 2014–19)	6.4%
FDI, inflows	\$4.2 million
Gross domestic private investment	\$5.8 billion
Employment–population ratio (+15 yrs)	42.7%
Employment–population ratio (15–24 yrs)	25.8%
Exports of G&S, 2014–19 (billion USD, 2019)	22.8% GDP (5.4)
Main exported commodities	Mineral fuels and oils; pearls, precious stones and metals; fish and crustaceans
Imports of G&S, 2014–19 (billion USD, 2019)	37.7% GDP (8.9)
Main imported commodities	Mineral fuels and oils; cereals; vehicles
Inflation (%)	1.8%
Bank credit to private sector (% GDP)	29.3%
Govt. expenditure	\$5.7 billion
Govt. revenue	\$4.8 billion
Total public debt	\$15.1 billion
Currency	XOF franc (XOF)
Languages	French (official), Wolof, Mandinka, Jola (Diola), Pular, Serere

Note: Data is for the most recent years.

Source: World Bank; IMF; UNCTAD; Comtrade.

A COMPETITIVE AND INNOVATIVE ECONOMY

Senegal ranked 114th in the 2019 Global Competitiveness Index, with an overall score of 49.7/100. It is the 10th most competitive economy in Africa and 3rd in West Africa, largely thanks to its strong and historically renowned institutions (86th worldwide, 8th in Africa and 2nd in the West African subregion), its high-quality infrastructure network (2nd), the quality of the health system and the depth of its financial system (3rd).⁸⁰

Moreover, the 2020 Global Innovation Index ranks Senegal the 2nd most innovative economy in West Africa (11th in Africa, 102nd globally), with a score of 23.7/100. Its top-ranked technology and institutional quality and knowledge outputs and 2nd-ranked market sophistication in the subregion, have contributed to this relatively strong innovative drive.

FAIRLY GOOD INFRASTRUCTURE QUALITY

The World Bank's Logistics Performance Index ranks the country 141st globally, 33rd in Africa and 10th in the West African subregion, with a score of 2.25/5. The logistics environment's most favourable dimension is the efficiency of the customs clearance process. The 2020 Africa Infrastructure Development Index of the African Development Bank ranks it higher, at 15th in Africa, and 4th in West Africa, with an overall score of 29.2/100. This is mainly due to the density and quality of its transport infrastructure system.

GOOD ENVIRONMENT FOR DOING BUSINESS

In terms of ease of doing business in the country, the World Bank ranks Senegal 123rd worldwide, 20th in Africa and 4th in West Africa, with an overall score of 59.3/100. While starting a business involves only four procedures (second fewest in Africa) and takes only six days (second lowest in the subregion), the time it takes to comply with border and documentary requirements when trading across borders is the lowest in the subregion (9th in Africa). However, *Forbes Magazine* ranks it higher, as the 100th Best Country for Business in the world, the 12th in Africa and the 2nd in West Africa.

INVESTING AND DOING BUSINESS IN SENEGAL

ONE OF THE FASTEST-GROWING ECONOMIES IN AFRICA

The Senegalese economy, with a GDP of \$23.6 billion, is the fourth largest in West Africa and the 17th across the continent. It has enjoyed a relatively strong economic growth, averaging 6.4% in 2014–19 (the 3rd highest in the subregion and 4th in Africa). The services sector continues to be the largest contributor to GDP growth and, on the demand side, investment and exports are the strongest drivers of growth. The ongoing COVID-19 pandemic reduced growth to 1.1% in 2020, but the economy is expected to rapidly return to its buoyant growth trajectory, with GDP growth projected at 6% in 2021 and a historic 12.2% in 2022 when extraction of newly discovered gas and oil reserves starts, effectively opening up unparalleled opportunities for investment, trade, growth and economic development.

A COMPETITIVE BUSINESS ENVIRONMENT

The country's business environment has been greatly improved as a result of approximately 50 reforms in the last few years. They have resulted, for example, in a reduced cost of **starting a business**, with a paid-in minimum capital requirement of XOF 25,000 (less than \$50), representing 37% less than the continental average. The process involves only four procedures with the one-stop shop (*Agence de Promotion de l'Investissement et des Grands Travaux* – APIX):

- (1) Deposit the founding capital with a bank (*compte de société en formation*) or through a public notary; once the registration is complete, the account will be liberated;
- (2) Check the availability of the company name;
- (3) Notarize company by-laws and bank deposit of subscribed capital; the involvement of a notary is required, and he/she can be asked by the company to complete additional formalities requested during registration;
- (4) Register the business at the one-stop shop, which specifically involves (i) registering the company bylaws with the tax authority and the commercial registry (*Registre du Commerce et du Crédit Mobilier* – RCCM); (ii) getting the company identification number (NINEA⁸¹); and

⁸⁰ 'Subregion' here means West Africa (ECOWAS), while 'region' refers to the African continent as a whole.

⁸¹ National Identification Number of Companies and Associations.

(iii) registering workers and commencement of operation with the labour authority. Two additional procedures are: registering with social security (*Caisse de Sécurité Sociale – CSS*) and the pension fund (*L'institution de Prévoyance Retraite du Sénégal – IPRES*).

Obtaining a **construction permit** generally costs 7.8% of the warehouse value. The latter is estimated at XOF 41 million (\$74,500). A total of 14 procedures are involved and they take 177 days to complete.

As in all the other business-related formalities, foreign investors are guaranteed **equal treatment** compared to their national and West African counterparts, and **visa rules** guarantee a duration of stay for expatriates that matches that of the business or the employment.

Labour force is estimated at 4.26 million individuals. The country scores 0.42 on the World Bank's Human Capital Index (13th highest in Africa, 2nd in the subregion), which indicates the extent of labour productivity as a result of education and health. The minimum wage is XOF 89,730 (\$170), and monthly salaries typically range from an average of XOF 88,600 (\$161.1) to XOF 1,560,000 (\$2,836.4).

Electricity supply is considered the most reliable and the tariffs the most transparent in West Africa (3rd in sub-Saharan Africa), according to the latest World Bank's Doing Business survey. It is priced at an average of XOF 100.1 (\$0.18) per kWh.

Water is readily available, with an estimated 75% of the population having access to at least a basic water source (91% in urban areas). The average tariff is XOF 419 (\$0.76) per cubic metre, with XOF 372 (\$0.68) for household and XOF 639 (\$1.2) for commercial use.

Infrastructure network in Senegal includes a new airport (Blaise Diagne International Airport – AIBD), which replaced the previous, smaller airport. It opened in December 2017 and is located near the town of Diass, 43 km east of Dakar. It is estimated to accommodate 3 million passengers and handle 50,000 tons of cargo and 80,000 aircraft movements annually.

The road infrastructure network is estimated at 14,500 km, of which 4,500 km are paved. It has been greatly improved in the past decade and a half, mostly in Dakar, with a toll highway linking with the nearby regions of Thiès and Diourbel.

The railroad network is made up of a cargo railway between Senegal and Mali, which has been operating since early the 1900s. It comprises 1,287 km, with 641 in Mali, and passengers admitted only on the Dakar–Thiès segment, a passenger train that provides regular commuter services between Dakar and Thiès via its suburb (a capacity of more than 4 million passengers per year), and the newly developed Train Express Regional, inaugurated in 2019, but not fully operating, and linking Dakar and the new airport (with a capacity of 531 passengers on its 1st and 2nd classes).

The port of Dakar is a major transit hub of subregional scope. It has tanker vessel loading and unloading terminals, and a container terminal with a storage capacity of 3,000 20-foot-equivalent units. It is also a cereals and fishing port, and has a dedicated phosphate terminal and a privately run ship repair facility.

The **taxation** system includes payroll tax (with statutory tax rate at 3%), social security contributions (10%) and retirement contributions (8.4%). Additional taxes paid by businesses include corporate income tax on taxable profits (30%), value-added taxes (VAT) (18%), local economic contribution (15% for rental or 20% on owned properties) and interest tax (16% on interest income). In total, taxes and contributions made by companies represent 44.8% of total profits, and involve 53 payments in a typical year. Furthermore, personal income tax is 0% (on annual income less than XOF 630,000) to 40% (more than XOF 13.5 million).

Customs duties follow the ECOWAS common external tariff (CET), which comprises five tariff bands, from 0% (essential social goods) to 35% (specific goods for economic development). Additional measures to protect vulnerable industries and guarantee fair competition in the liberalized subregion include safeguard measures, anti-dumping measures, anti-subsidy and countervailing measures and supplementary protection measures.

The **banking and financial system**, under the framework of the WAEMU, is relatively well structured, open, sound and stable, with: (i) almost 30 banks with a relatively dense web of local branches, moderate interest rates on loans (7.6% average), a system-wide regulatory capital to risk-weighted assets of 13.2%, and relatively low net non-performing loans (5.5% of total bank loans); (ii) a greater number of microfinance institutions; and (iii) a subregional stock exchange market with 65 listed companies (as of June 2021), including FDI companies.

Senegal's banking sector that offers credit to the private sector represents 58.7% of GDP, and has the largest contribution to the economy in the entire subregion. The openness of the banking and financial system means that foreigners and nationals alike can maintain **foreign currency accounts**, and international flows of capitals (including remittances and profit transfers) are relatively free. The **exchange rate** against the euro is fixed at XOF 655.96, reducing the risk and uncertainty associated with unpredictable fluctuations.

Incentives for foreign investors include special economic zones (SEZs). Companies located in one of the three newly developed SEZs in Diamniadio, Diass and Sandiara (on the outskirts of Dakar, close to the new airport, and accessible via the recently built toll highway and the national road) can enjoy special fiscal treatment. This includes an exoneration from all income taxes, 15% business tax in case of positive profit and no tax in case of losses (similarly to newly established firms since early 2020), as well as no import or export duties (except the ECOWAS solidarity tax of 0.5% on imports from third-party countries).

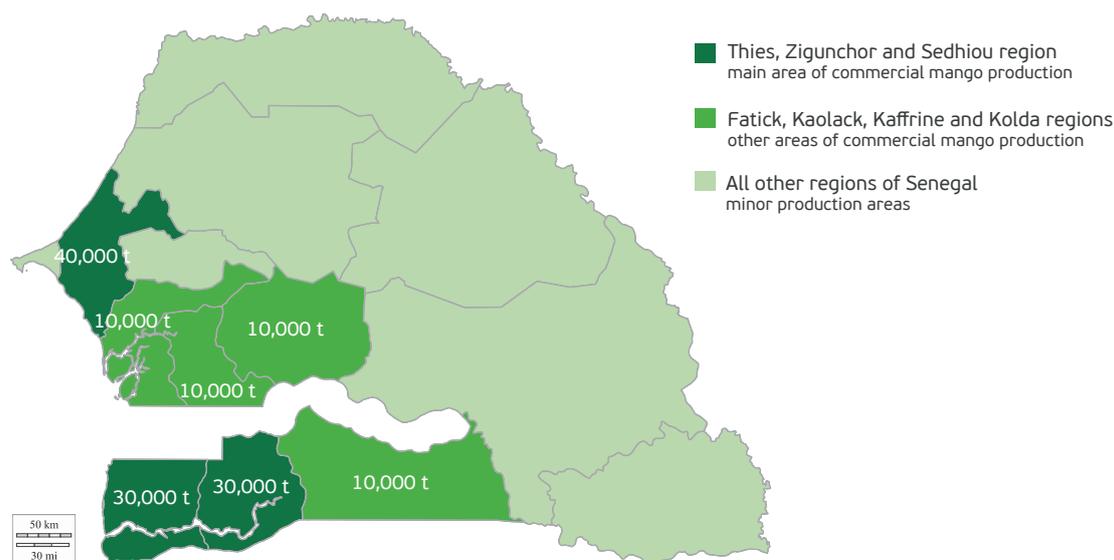
Overall, the competitiveness and innovative drive of the Senegalese economy, the strength and stability of the institutional and legal framework, and the conduciveness of the business climate contribute to making the country a viable destination for foreign investors seeking a favourable destination in Africa.

MANGO IN SENEGAL: AN OVERVIEW

Mango production in Senegal is estimated to be 125,000–130,000 tons. The main production areas are Casamance and Niayes (respectively 40% and 30% of annual production). Mango is also cultivated in other regions such as Sine-Saloum (10%), central zone (15%) and Saint-Louis (5%).

It is estimated that the mango sector generates a direct income to 25,000 people in Senegal. Smallholders own 70% of mango areas, and these small-scale orchards average 1–10 ha. Farmers' investment and management of these plots are minimal. There is an increasing number of commercial farms (more than 50 ha) such as D3S, SAFINA/FILFILI, Hortica, Cayor Fruits and Notto AgroIndustrie, whose production is destined for the international market. Their mango production is for the international market. These companies have made investments (irrigation and mango tree treatment) in order to get the best grade for the international fresh mango market, with some investing in organic production (Notto AgroIndustrie). There is also an expansion of smaller commercial farms of 10–50 ha. This production is bought by export companies without plantations, which provide the farmers with supervision and support to produce higher grades.

Figure 32: Mango production by region in Senegal

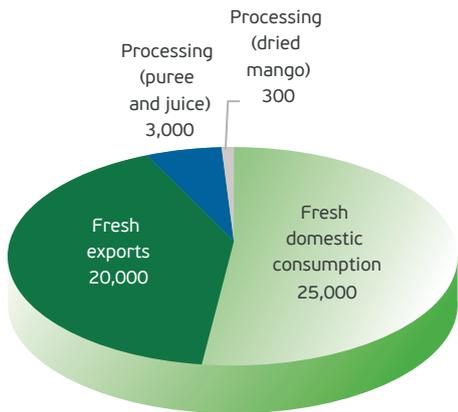


Source: Consultant, based on industry interviews

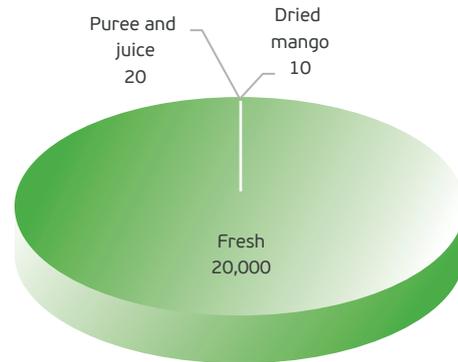
Table 11: Production and export calendar in Senegal													
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
		Export season											
		Production season											
Regions	Niayes Central												
	Niayes Sud												
	Basse Casamance												
	La Moyenne Casamance												
	Groundnut Bassin												
	North												
	Petite Côte												
	South-East												

Figure 33: Production outlet and quantity of exported mango from Senegal (in tons)

Outlets of the marketed production 2019



Exported mango products 2019



Source: Consultant, based on industry interviews and customs stats.

between dry and rain season. In areas like Niayes, the dry season lasts nine months and groundwater can run low in some places (+20 m), which means that irrigation is needed to compensate drought and produce mango. Kent and Keitt are the varieties most cultivated and sought after, but Tommy Atkins, Zill and Valencia Pride varieties are also cultivated in smaller proportion.

Forty companies are active in fresh mango exports, of which 10 are producing–exporting companies and 30 are just exporters. Hundreds of enterprises are involved in mango processing, but the majority are small and artisanal SMEs with no employees.

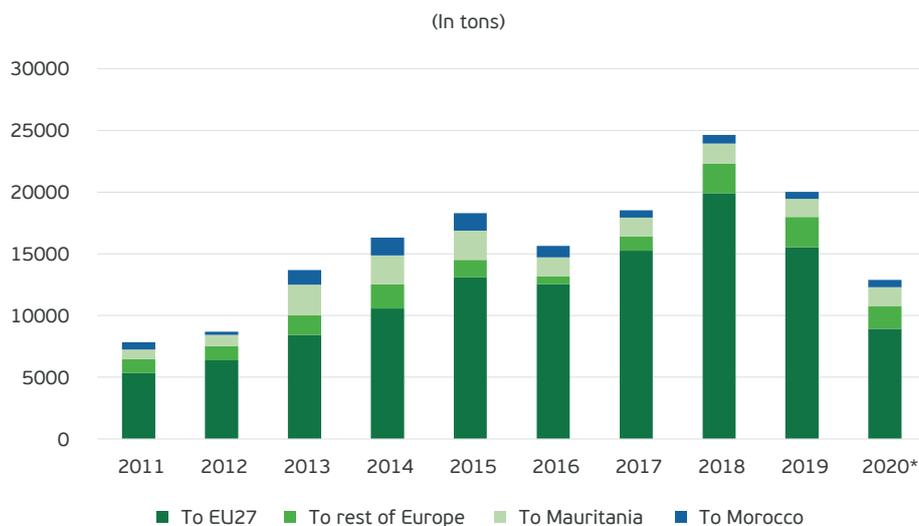
Fresh mango exports are generally concentrated in 12 weeks, from the second half of May to the first half of August. Fresh mango exports have been growing and reached 15%–16% of the annual production in 2018–19 (21,430 and 19,450 tons respectively). In 2020, exports dropped to 15,000 tons due to the pandemic. Eighty-five per cent of fresh mango exports is destined for the EU market, with the remaining 15% sent to neighbouring countries (e.g. Morocco and Mauritania). Exportable mangoes come first from the Niayes region (78% of exported mango). Casamance, though a prominent production region, only supplies 8%–10% of fresh mango exported due to the distance from export infrastructure, and approximately 10% of exported fresh mango comes from Sine-Saloum.

The processing sector is less developed. Processors are concentrated near the capital, in Dakar, Pakine and Rufisque, and the majority are small artisanal units. ITA⁸² and Performance Afrique have supported dried mango and a small quantity has been exported to the Swiss Confederation and the United Kingdom. There are also small processing units run by women cooperatives (Fruitales, Esteval, and Zena Exotic Fruits in Casamance) producing juice and jam for the local market (supermarkets and airports) and international market. Larger processors are few (such as Agrofruits, which produces mango pulp and juice). Processed mango exports have been irregular: 16 tons of mango pulp to the EU in 2016 and 14.5 tons to neighbouring countries in 2018, 10.3 tons of dried mango to the EU in 2018 and 340 kg in 2019, and 1.15 tons of mango jam to the EU in 2017. More than 1,400 tons of fresh mangoes were imported in Senegal in 2020,⁸³ of which 1,150 tons were from Mali.

Dakar is the main national market for fresh mango and mango products. There is great local demand for fresh mango and traders cannot meet it, especially in the north of the country. Wholesalers focus their supply on the main cities, and remote areas are supplied by retailers and local traders. The Kent variety is the most sought after by local consumers.

Fruit fly remains one of the main challenges for the sector, as it decreases the exportable season and mango quality. Along with good practices to decrease fruit fly pressure (pruning, weeding and lesser density of mango plots), local stakeholders are investing in locally available technology to control pests, such as hot water treatment (MAF RODA AGROBOTIC) and the biopesticide Spinosad.

Figure 34: Evolution of Senegalese mango exports by product in 2011–20



Source: Consultants, based on ITC Trade Map data and industry feedback.

82 Institute for Food Technology.

83 Based on available customs data, Guinea exports were missing at the time of data compilation.

MANGO VALUE CHAIN AND STAKEHOLDERS

INPUT SUPPLIERS AND SERVICES

Organic inputs: ORGANOVA (fertilizer) and GF120 (fruit fly bait) with the name of Spinosad.

Packaging: Pallets treated with NIMP 15 are available from the Groupe Diakhaté Palettes SARL and MBAO-Bois, and FUMOA produces pallets from broken ones (XOF 3,500/unit).

Treatment: Hot water treatment against fruit fly is available locally through MAF RODA AGROBOTIC.

PRODUCERS

Three categories of mango producers exist in Senegal:

- **Commercial orchards** are managed by companies (Safina, Hortica Sénégal, Domaine Agricole de Nema, Agullo Sénégal, Notto AgroIndustrie, Cayor Fruits, and CADA Sarl). Acreage is more than 50 ha of mango trees and density is 400–500 mango trees per hectare, with production focused on Kent and Keitt varieties. The cultivation method is similar to those of South Africa and Israel. The mango plots are irrigated and regularly maintained, including phytosanitary treatments, and yields reach 20–40 tons/ha. Their production is mainly for export and they have their own pack house and cold storage facilities. A few are certified organic (Notto AgroIndustrie) and most are certified with other international standards (GLOBALG.A.P., Sedex Members Ethical Trade Audit, Tesco Nurture Certification and Rainforest Alliance).
- **Intermediary orchards** have a mango acreage of 10–50 ha. This model is growing in Senegal, as fresh mango exporters without mango plantations rely on them for supply. These producers tend to respect good cultivation practices and often receive supervision and support from exporters. Some of these producers can be certified organic if their exporting partner needs it.
- **Small-scale orchards** (1–10 ha) are the most common (70% of national mango acreage). These producers undertake few investments in their mango plots (no inputs, no pruning and no irrigation), and the lack of orchard maintenance makes less than 10% of their production suited for exportation.

FRESH MANGO EXPORTERS

Forty exporting companies are active in Senegal's fresh mango sector, with 10 of them having a plantation, their own pack house and cold storage. In 2020, Cayor Fruit and Safina were the leaders in the sector, followed by SEPAM, Blue Skies and SANEPRO. The biggest companies (Cayor Fruits, and SAFINA SA) have an annual turnover of XOF 800–900 million. Other exporting companies have an annual turnover of XOF 200–250 million and the smallest an annual turnover of XOF 10–50 million. Exporting companies are often certified according to the international market demand (GLOBALG.A.P, bio certification, SMETA, Tesco, Fairtrade, and Rainforest Alliance). Approximately 50% of their production is sent to the international market (especially the EU market), with the remaining production sold to local processors and other exporters.

The Feltiplex collective pack house, managed by Fondation Origine Sénégal/Fruits & Légumes (FOS/FL) in Niayes, plays a big role in fresh mango export, as 50% of fresh mango exports go through this facility. The packing facility of the Fédération des Producteurs Maraîchers de la Zone des Niayes (FPMN) is also available for exporting companies and have been used by some of them in recent years.

Quality is an important issue for these stakeholders. Available fresh product can present a high heterogeneity and pests, especially fruit flies, have a significant impact on the product quality and increase risk of interception on the EU market. Approximately 25% of mangoes are rejected during sorting in conditioning centres. Moreover, fruit flies shrink the exportable mango season. Other issues are the availability of reefers and some companies continue to lose shipments due to the lack of available reefers, although some exporters can invest in their own reefers or stock them before the season starts. The lack of finance prevents some exporting companies upgrading their packing equipment and accessing certification. Diversification and professionalization of enterprise management also need to be considered for some of these companies.

Many exporters need to upgrade their cleaning and conditioning line and invest in cold storage. However, many have difficulties to access finance, as they are not used to creating business plans and dealing with investors and banks and, though profitability is good (10%–20%), it is concentrated in time (trade season), making capital constitution and loan repayment hard. Only exporters with diversification strategies (producers–exporters) manage to access funds. It

remains more profitable for investors to invest in a pack house, rather than in export, or in commercial plantations oriented towards export.

Sorting costs for exporting companies are high and low homogeneity of exported mango leads to lower prices and rejection at the borders of importing countries. One solution is large commercial orchards managed professionally by cooperatives.

Fruit flies are one of the important issues affecting mango quality. In order to comply with EU rules on treatment before conditioning (fumigation or hot water), investors have distributed treatment units against fruit flies. Total costs of the operation were XOF 38,000,000. Notto AgroIndustrie has, for example, installed a small hot water treatment unit in its packaging plant.

The European Union has revisited its phytosanitary regulations. On 14 December 2019, a new phytosanitary regulation (EU 2016/2031) entered into force. It introduces rules to prevent the introduction and spread of pests and diseases in the EU. This approach is much more proactive and will affect the European sector, as well as imports from third countries outside the EU. The new regime includes new requirements covering the export of mangoes to prevent the introduction of non-European fruit flies (*Tephritidae*). The new rules stipulate certain conditions that exporting countries must meet before mango exports are allowed. Some of these conditions refer to the International Standards for Phytosanitary Measures (ISPM). The ISPMs are developed by the International Plant Protection Convention of the Food and Agriculture Organization of the United Nations (FAO) and are recognized by the WTO Sanitary and Phytosanitary Agreement. Exporting countries should refer to the relevant ISPMs in order to fully understand and comply with EU regulatory requirements. Within the framework of risk management, the EU recommends that exporting states and companies consider fumigation or hot water treatment of mangoes in packaging.

PROCESSING SECTOR

Senegal's mango processing sector is quite small. The main processing regions are Dakar, Casamance and Thiès, with most of the processors in Dakar.

Currently, approximately 10 large processing companies are active in Senegal, focusing on mango pulp and juice. The level of investment required for a processing company remains variable, depending on

the size of the plant and facilities (it usually ranges between XOF 20 million and 1 billion. The biggest company involved is Agrofuits (group SIAGRO/ Kirene), which produces mango juice and aseptic mango pulp. Agrofuits has an annual turnover of XOF 500 million and produced up to 2,000 tons of mango pulp in 2018. The mango pulp is mainly used for juice confection for the local market, though some quantities have also been exported (the Republic of Angola). Processing companies are more active in Casamance than in the central regions. The average use of mango by processing unit is 2.3 tons/year, with an important disparity between mango producing areas: 0.5 tons/year in Niayes and 2.9 tons/year in Casamance. Cost of the raw material is lower in Casamance due to the production surplus and limited interest of the fresh mango exporting sector. The pulp production was estimated at 617 tons in 2019, and production is mainly for the domestic juice market, with export reaching 14 tons in 2019. However, there is a growing demand for mango pulp, notably from other ECOWAS countries, which can be an opportunity for the Senegalese processing sector.

Dried mango processing is little developed in Senegal, although some processing units have semi-industrial standards. While local consumption is unknown, dried mango exports reached 10 tons and 340 kg in 2019 and 2020 respectively. However, some international companies (Biovision Senegal, and Trading Forex) are investing, showing that there are some perspectives to develop this segment for the international market.

Small, local artisanal processing units also produce mango jam for the local markets, with small batches going to the export market.

WHOLESALEERS

Local wholesalers play a key role in aggregating and distributing mango production across Senegal. The main destinations are Dakar and other big cities. Mango is less supplied to remote areas (northern parts of the country) due to high losses during transportation, and only small traders and retailers are willing to supply this market. Local wholesalers sell first Kent and Boukodiékhal varieties. Purchases and transportation in truck is done in 40–70 kg cardboard or basket, and 80% of wholesalers store fresh mango in open air. Only 4% of wholesalers have a cold room for storage, and local trade is done in 20 kg racks or recycled cardboard. Of small mango traders and retailers in cities, 90% are women.

RETAILERS

Supermarkets procure from commercial farms or more equipped wholesalers such as Senfresh. They are supplied once a week, mostly with the Kent variety, and they purchase in 20 kg racks. Supermarket sales are mainly during the rainy season and Ramadan. Most sales of fresh mango are on local markets, street and road sales. Varieties sold depend on availability, but consumers prefer Boukodiékhal, Kent and Keitt varieties.

ORGANIZATIONS IN THE VALUE CHAIN

Mango producers are often part of producers' organizations and cooperatives. Some of them are in larger networks, such as the Fédération des Agropasteurs de Diender (FAPD) or the Fédération Nationale pour l'Agriculture Biologique (FENAB), which supports organic production in Senegal. The Organisation Nationale des Producteurs Exportateurs de Fruits et Légumes du Sénégal (ONAPES) and the Sénégalaise d'Exportation de Produits Agricoles et de Services (SEPAS) is a grouping of producers-exporters, and La Fédération des Professionnelles de l'Agro-Alimentaire (FP2A) and the Coopérative Agroalimentaire de Casamance (CAC gathers some of the processors active in the mango sector.

Senegal is a member of the l'Alliance Régionale de la Mangue Ouest (ARMAO), which recommended country members to establish their own national inter profession. To this effect, the Interprofession des Acteurs de la Mangue au Sénégal (IAMS) was established in 2019 with the support of USAID.

INFRASTRUCTURE

The port has limited capacities for fresh fruit storage and no fruit quay is planned for the new Ndayane port. Transport costs are high due to bad road infrastructure and the quasi-monopolistic position of SDV-Bolloré regarding exports. SDV-Bolloré has dedicated trains and infrastructures for the mango season, but the lack of reefers has caused massive losses for a number of exporters, and 40-foot reefers (21 tons of mango) cost €4,500–€6,000.

Fresh mango exports from Casamance are generally transported to Dakar in refrigerated trucks and potted there. Potting directly in Casamance (Ziguichor) is rarely an option, as there is no regular service at the Ziguichor port and a reefer round trip from or to Casamance is very costly.



INVESTING IN MANGO IN SENEGAL: KEY FIGURES



Input supply

Number of mango plant nurseries within the country: Approximately 300

Number of suppliers of fertilizer/ phytosanitary treatments within the country: 500 agribusinesses

Number of suppliers of organic fertilizers/ phytosanitary treatment within the country: 20 companies

Number of national manufacturers of mango packaging (cartoons and paper kraft cardboards, etc.): 5 companies



Production

Estimated total production: 130,000 tons

Estimated commercial production: 50,000 tons

Number of commercial mango farms (with >1 ha mango orchard): +/- 15,000 farms

Average yield of commercial mango farms: 5 tons/ha

Farm gate prices (export varieties):
Min.: XOF 100/kg; median: XOF 125/kg;
max.: XOF 175/kg



Marketing

Distance from main production area to airport: 50 km

Distance from main production area to port: 100 km

Number of available platforms/centres for cleaning/packaging/export: 15

Number of exporting companies: 30

Volume of fresh export in 2020: 20,000 tons

Rejection rate in the EU in 2020: 7%



Processing

Share of local processing (on commercial production): 7%

Main process: Juices for local market

Number of industrial processing companies: 18⁸⁴



Investment indicators

Cost of land in rural area: XOF 500,000 (\$910) per hectare

Cost of land in urban area (prefecture): XOF 2,500,000 (\$4,550) per hectare

Cost of land in industrial zone in Dakar: XOF 250,000,000 (\$450,000) per hectare

Cost of power: XOF 144 (\$0.26) per kWh

Cost of unskilled workforce: XOF 50,000 (\$90) per month

Cost of skilled workforce: XOF 120,000 (\$220) per month

Cost of transportation: Niayes–Dakar: XOF 9/kg (\$350/20' reefer)

Enabling Business in Agriculture (EBA 2019) score and rank: 43.98 (rank 79/101)

Doing Business (2020) score: 59.3 (rank 123/190)

84 Processing companies: Agrofruits, Baobab des Saveurs, Biosene, Blue Skies Sénégal, Buur Sine International, Casa Technologie Alimentaires, Coopérative Agroalimentaire de Casamance, Domaines Agricoles de Néma, Esteval, Fruitales SARL, GIE des Femmes de Ndamé Lô, Maria Distribution, Waare Productions, Marie Diallo Laboratoires, Pronat SARL, and Zena Exotic Fruits.

INVESTMENT OPPORTUNITIES IN SENEGAL'S MANGO SECTOR

OPPORTUNITY 1: SERVICE PROVIDING TO MANGO SECTOR

The rapid growth of the Senegalese mango sector creates a strong demand for modern services such as nurseries, watering systems, grafting, pruning and tree care services. In addition to the mango value chain, those services can be sold to Senegal's very dynamic horticultural sector at large.

OPPORTUNITY 2: MANGO JUICE PROCESSING IN CASAMANCE

The new South Agro-Industrial Processing Zone Project south of Ziguinchor⁸⁵ aims to host fruit processing plants and target particularly the mango value chain. Access to a diversity of tropical fruits (mango, papaya, pineapple and coconut, among others), with low prices due to region's isolation, make this agribusiness zone perfect to start or diversify a juice processing business. Improving infrastructure of the port of Ziguinchor will also be an important advantage for the first investors into this new Agropole.

OPPORTUNITY 3: TEMPERATURE CONTROLLED INFRASTRUCTURES FOR EXPORT OF FRESH MANGO

The growing exports of mangoes and more generally of Senegalese horticultural products is leading to a growing demand for temperature-controlled infrastructures and logistics. Providing transport, storage and processing facilities under controlled temperatures provides strong investment opportunities to attract mango as well as other fruits and vegetable exporters. Including a cold chain linkage between infrastructures close to the new port of Dakar-Ndayane and the main fruit and vegetable production regions (Niayes, Sine Saloum and Casamance) would take advantage of the birth of the new el dorado of fruit and vegetable production in West Africa.

INVESTMENT AND MANGO SECTOR SUPPORT STRUCTURE AND PROGRAMMES

The establishment of partnerships between research organizations and economic operators is an essential element for the development of a sustainable and quality exportable product offer. The importance of research and development activities has been highlighted in several national reviews of green exports conducted by UNCTAD (UNCTAD, 2017 & 2018).

In Senegal, the Institut de Technologie Alimentaire's (ITA's) work contributes to the improvement of the level of valorization of local productions. The ITA is engaged in studying local mango varieties in order to develop solutions adapted to the production of pulp, dried mango and jam. These varieties are currently neither exported nor valorized, which contributes to the sector's high losses. In addition to its economic potential, the valorization of an increased number of mango varieties could contribute to the preservation of biodiversity while extending the operating periods of processing units. To this end, the ITA has developed more than 10 products from mango (puree, compote, jam, marmalade, syrup, natural dried mango, semi-preserved dried mango, mango leather, mango vinegar, mango slices in syrup, chutney, nectar and drink).

The ITA is working on five local mango varieties and the initial research results are promising. The research focuses on the physical-chemical, nutritional and aromatic characterization and the technological aptitude of these varieties for processing. This highlights the increasing investment potential across the various segments of the mango sector in Senegal.

85 More information available on the investment incentive and available facilities: www.aprosi.sn.

Table 12: Investment and mango sector support in Senegal

Organization	Mandate	Contact person and telephone number(+221)
L'Agence de Développement et d'Encadrement des Petites et Moyennes Entreprises (ADEPME)	Agency supporting SMEs	Mbaye Diouf Tel.: 775380551
Agence Senegalaise de Promotion des Exportations (ASEPEX)	Agency supporting export from Senegal	Ndiassé Ngom Tel.: 773605596 Pape Dieng Tel.: 338692021
Bureau de Mise à Niveau (BMN)	Support to innovation	Cheikh Tidiane Faye Tel.: 776313680
Délégation à l'Entreprenariat Rapide des Femmes et des Jeunes (DER- F/J)	Support to initiatives with job creation for youth and women	Pape Jean Tel.: 338592200
Direction de l'Horticulture (DHORT)	Ministry department in charge of support and regulation of the horticulture sector	Macoumba Diouf Tel.: 776394091
Direction de la Protection des Végétaux (DPV)	Ministry department in charge of pest control	Abdoulaye Ndiaye Tel.: 776111175
Directions Régionales de Développement Rural (DRDR) Ziguinchor	Ministry department in charge of support to rural development	Casimir Sambou Tel.: 775775008
Fonds National de Développement Agro-Sylvo-Pastoral (FNDASP)	Fund supporting project in agribusiness	Jean Charles Faye Tel.: 777408310
Fondation Origine Sénégal – Fruits et Légumes (FOS-FL)	Foundation supporting fruit sector	Pape Amadou Sidibé Tel.: 338201959
GIZ	German cooperation supporting mango sector	Karim Tall Tel.: 338604252
United States Agency for International Development (USAID)/Naforé	American cooperation supporting mango sector	Mamadou Diop Tel.: 771857239
Locafrique	Main bank financing SMEs in agribusiness in Senegal	Ibrahima Diakhoumpa Tel.: 776304259
La Banque Agricole	Main bank financing agribusiness in Senegal	Cheikh Ndiaye Tel.: 77 3332487
Institut de Technologie Alimentaire	Public institute in charge of technical innovation for food processing	Nafissatou Diop Tel.: 776359464
Direction de l'Environnement et des Etablissements Classés	Ministry department in charge of environment standards	Cheikh Fofana Tel.: 776493468

SWOT OF SENEGAL'S MANGO SECTOR

Senegal's mango sector				
	Mango production	Fresh mango export	Dried mango	Pulp/juice
Strengths	<ul style="list-style-type: none"> Production period delayed in comparison to other producing countries Important part of orchard managed without chemicals Existing cooperation between producers and exporters Existing referential and common specification in the sector 	<ul style="list-style-type: none"> Existing conditioning centres Existing certified analysis laboratory Senegalese mango appreciated in the international market Favourable export window 	<ul style="list-style-type: none"> Local variety in Casamance (Bodian, Diourour) Positive experience from some individual entrepreneurs Good all-year conservation 	<ul style="list-style-type: none"> All-year availability of aseptic bag
Weaknesses	<ul style="list-style-type: none"> Old orchards (35 years old on average) Most orchards poorly maintained High losses Low level of certification No market knowledge 	<ul style="list-style-type: none"> High farm gate prices High losses in conditioning centres High logistical costs in Ziguinchor (Africa Express Line monopoly) Low subregional connections 	<ul style="list-style-type: none"> Low level of production and consumption locally Low valorization of sub-product Kent most used 	<ul style="list-style-type: none"> Lack of skilled workers
Opportunities	<ul style="list-style-type: none"> Growing demand for fresh mango Growing pulp production 	<ul style="list-style-type: none"> Growing organic product demand, not satisfied at importer level 	<ul style="list-style-type: none"> Existing innovation for processing and sub-product valorization Growing cosmetic industry in Senegal and international demand for natural ingredients 	<ul style="list-style-type: none"> Potential to create new product Existing innovation for processing and sub-product valorization Growing cosmetic industry in Senegal and international demand for natural ingredients
Threats	<ul style="list-style-type: none"> Land pressure Fruit flies 	<ul style="list-style-type: none"> Rejection 	<ul style="list-style-type: none"> Technologies badly used and costly (no stocks and bad quality) 	<ul style="list-style-type: none"> High prices

3.3. MALI

COUNTRY OVERVIEW

Mali is a large territory located in the heart of West Africa, sharing 7,243 km of land boundaries with seven countries. Approximately 65% of Mali's land area is desert or semi-desert, corresponding with a hot and dry climate, negligible rainfall in most of the country and frequent droughts. The Niger River, with 1,693 km in Mali, provides a large and fertile inland delta, and is rightly considered as the country's lifeblood for being a valuable source of drinking water, irrigation, as well as transportation and food.

Mali had an influential role in shaping the subregional history and culture. Starting with a small Malinke kingdom around the upper areas of the Niger River, it developed into a rich and prosperous Malian empire between 1240 and 1645, which controlled the trans-Saharan trade in gold, salt, slaves and other commodities. It spread its language, laws, faith and customs to almost the whole subregion. This provides a background for a rich, diverse and open culture, with various renowned historical sites considered as part of world heritage (such as Timbuktu and Gao). The richness of the multicultural setting also shows in the many local languages spoken in the country, such as Manding, Soninke, Bomu, Bozo, Dogon, Fula and Senufu, all of which consist of more than 60 dialects; French remains the official language.

Approximately 44% of the 20.7 million Malians live in urban areas, mostly in the capital cities of the eight regions and the capital district of Bamako. Other major cities include Segou, Sikasso, Kayes, Kidal and Mopti, mostly located in the south-west.

Since the early 1990s, Mali has embraced a democratic presidential political system. A national conference in 1991 gave the country a constitution, a charter for political parties that can be formed freely, and an electoral code, all of which form the guiding principles of the political and governance framework of a semi-presidential representative democratic republic.

Mali – key facts	
Capital city	Bamako
Area	1,2 million km ²
Population, total	19.7 million
0–14 years	47.3%
15–65 years	50.2%
Youth literacy (15–24 years)	50.1%
Male	57.8%
Female	43.4%
GDP, nominal	\$17.5 billion
GDP growth, real (2014–19)	5.2%
FDI, inflows	\$494 million
Gross domestic private investment	\$3.9 billion
Employment to population ratio (+15years)	65.7%
Employment to population ratio (15–24 years)	51.2%
Exports of G&S, 2014–19 (billion USD, 2019)	23% of GDP (4.03)
Main products	Pearls, precious stones and metals; cotton; live animals and animal products
Imports of G&S, 2014–19 (billion USD, 2019)	34.2% of GDP (5.98)
Main products	Mineral fuels and oils; vehicles; electrical machinery and equipment
Inflation	-1.7%
Bank credit to private sector	24.2% of GDP
Govt. expenditure	\$4 billion
Govt. revenue	\$3.4 billion
Total public debt	\$7.1 billion
Currency	CFA franc (XOF)
Languages	French (official), Manding, Soninke, Bomu, Bozo, Dogon, Fula and Senufu, etc.

Note: Data from the most recent years is shown.

Source: World Bank, IMF, UNCTAD and Comtrade.

MALI STANDING IN THE AFRICAN AND GLOBAL CONTEXTS

A FAIRLY COMPETITIVE AND INNOVATIVE ECONOMY

The Global Competitiveness Index ranked the overall competitiveness of Mali's economy 129th globally, 25th in Africa and 9th in West Africa, with a score of 45.6/100.⁸⁶ The contributing factors to this overall performance are macroeconomic stability (4th in West Africa), the large market size (5th), high-quality infrastructure and stable financial system (6th), and business dynamism and innovation capability (7th).

The Global Innovation Index ranks Mali as the 123rd most innovative country in the world, 24th in Africa and 7th in the subregion, with a score of 19.2/100. This ranking is due to the extent and quality of knowledge and technology outputs (2nd in the subregion), and the level of business and market sophistication (6th).

GOOD REGULATORY ENVIRONMENT

The World Bank's Worldwide Governance Indicators rank Mali's political institutions 153rd in the world, 24th in Africa and 10th in West Africa. The regulatory quality is the dimension in which the country fares relatively well in the subregional context, with 7th rank.

GOOD LOGISTICS SYSTEM AND INFRASTRUCTURE

When it comes to the quality of logistics, the World Bank's Logistics Performance Index ranks the country 96th in the world, 12th in Africa and 4th in the subregion, with an overall score of 2.59 out of 5.⁸⁷ The performance mostly owes to the ability to track and trace consignments, which is the 2nd strongest in the subregion. Additionally, the African Infrastructure Development Index ranks Mali's overall infrastructure quality 9th in West Africa and 35th on the continent, with a score of 16.7/100. The subcomponents of water supply and sanitation infrastructure are 5th in the subregion, while electricity and ICT infrastructure come 6th.

BEST ENVIRONMENT FOR CROSS-BORDER TRADING IN THE SUBREGION

The conduciveness of the business environment is ranked 148th globally, 27th in sub-Saharan Africa and 8th in West Africa, according to the World Bank's Ease of Doing Business, with an overall score of 52.9/100. The country fares better than its subregional counterparts do in the dimension of trading across borders, for example, with the lowest monetary cost of documentary compliance. Furthermore, the country is ranked the 132nd Best Country for Business by *Forbes Magazine*, 25th in Africa and 10th in the West African subregion, thanks to its economic growth, GDP per capita, trade performance and population size.

INVESTING AND DOING BUSINESS IN MALI

FAST-GROWING ECONOMY

Mali's economy has been on a sustained growth trajectory, with rates averaging more than 5% in 2016–20. This is largely thanks to a robust agricultural sector (2nd largest cotton production in Africa, estimated at 500,000 tons/year, and 1st largest livestock – mostly sheep and goat – in the subregion), and a thriving mining sector (the country is the 3rd largest gold producer in Africa, with 50 tons annually, and has large reserves of iron, bauxite and uranium). As a result of the COVID-19 pandemic, growth contracted by 1.65% in 2020, through a sharp decline in travel, trade, FDI and remittances. However, the economy is expected to bounce back in 2021 with a projected 4% growth rate, thanks to containment measures and a package of economic and social support responses, combined with improved security in the north that are expected to expand the country's productive base and help attract more investment.

RELATIVELY LOW COST OF DOING BUSINESS

FDI has been flowing into the country at an average annual rate of 2.2% in the last decade, reaching \$493.8 million in 2019.

Foreign investors considering investing in Mali would go through the relatively easy administrative processes of **starting a business**, consisting of five procedures:

86 Most recent available years are considered for each ranking.

87 'Subregion' is used to denote West Africa (ECOWAS), while 'region' refers to the African continent.

- (1) Deposit the initial capital with a bank or a notary, and then obtain the certification;
- (2) By-laws, sign an affidavit to certify the absence of criminal records and pay the registration fee at the notary; a public notary is required by law;
- (3) Purchase legal stamps at the one-stop shop (*Agence de Promotion de l'Investissement*, located throughout the country, mostly in Bamako, Mopti, Sikasso, Kayes and Segou) needed for obtaining the authorization to operate, and the applications for the *impôts* (taxes), the Tribunal de Commerce and the statistical office;
- (4) Deposit all registration documents and forms at the front desk of the one-stop shop in order to register with all the services represented;
- (5) Publication of the notice of incorporation in a press journal.

All of these procedures take an average of 11 days to complete, and the total fees amount to XOF 265,750 (\$483.2).

A **construction permit** can be acquired in 124 days, and it requires 12 procedures and costs an average of 9.3% of the warehouse value. **Registering property** (land, commercial or residential) requires five procedures and takes up to 29 days, at a cost averaging 11.1% of the property value. National laws guarantee **equal treatment** between nationals and foreigners, whether investors or workers.

For **visa rules**, expatriates from ECOWAS or elsewhere are entitled to a period of stay that matches their employment or business duration, with no extra limitations.

The **labour force** comprises 7.3 million individuals, of which two-thirds are employed – more than the continental average of 60.2%. On the World Bank's Human Capital Index, Mali scores 0.32. The country's guaranteed minimum wage (SMIG) has been at XOF 40,000 (\$73) since 2016 and the salary distribution typically goes from XOF 83,500 or \$151.8 (lowest average) to XOF1,470,000 or \$2,672.7 (highest average), with actual maximum salary being higher, depending on the industries and workers' skills and education.

Energy is relatively cheap in Mali. Electricity is charged at a rate of XOF 78.1 (\$0.14) per kWh, the 3rd lowest in the subregion. Obtaining a connection to the national grid takes approximately 120 days, and the process involves only four procedures (2nd fewest in Africa). Overall, 50.9% of the population has access to electricity.

Water is readily available, despite the country's arid conditions. The share of the total population using at least basic drinking water services is 78.3% nationwide, and 92.2% in urban areas. Water charges are XOF 110 (\$0.2) to XOF 583 (\$1.06) per cubic metre, depending on the interval blocks and on the type of use (commercial/industrial or residential).

Mali's **infrastructure** network comprises 15,100 km of roads (of which 1,827 km are paved), 729 km of meter-gauge railway that links Bamako to Senegal's railway through Kayes, 1,815 km of waterways that are navigable (mostly on the River Niger), one major port located in Koulikoro in western Mali on the River Niger, and Modibo Keita International Airport in Bamako-Senou (in addition to medium airports in Gao, Kayes, Mopti and Timbuktu).

When it comes to the **tax system**, businesses are expected to make up to 35 payments annually, which could take 276 hours. The tax structure comprises standard corporate tax (35%, tax on dividends at 10%), value-added tax (18%), payroll tax on the gross salary of each employee (3.6%), a 35% contribution to the social security funds paid by the employer on the employee's gross salary, and real property tax at an annual rate of 3% of the value of the real estate, whether developed or not. Furthermore, companies are allowed to carry forward tax losses for up to three years, but carry back of losses is not allowed, and holding companies are not subject to any corporate taxation in Mali. In addition, personal income tax is approximately 7%.

Customs duties are based on the ECOWAS CET, which is made up of five tariff bands. They range from 0% (essential social goods) to a maximum of 35% (specific goods for economic development). Additional measures destined to protect vulnerable industries while guaranteeing fair competition throughout the liberalized subregional markets include safeguard measures, anti-dumping measures, anti-subsidy and countervailing measures, and supplementary protection measures.

The **banking and financial system** is part of the West African Economic and Monetary Union's integration scheme which provides it with stability. The average bank lending rate was 7.7% in 2019, and total credit to the private sector represents nearly one-quarter of GDP, the 5th largest in the subregion. The extended reach of the 14 national, regional and international banks operating in Mali guarantees the availability of foreign currencies at a relatively predictable rate (partly thanks to the **fixed exchange rate** of the common XOF currency against the euro), free international money transfers (e.g. remittances),

and the possibility for individuals and businesses to maintain **foreign currency accounts**.

As part of the financial integration in the WAEMU, FDI companies can access and raise capital in the subregional **stock exchange market** (*Bourse Régionale des Valeurs Mobilières*), which has 65 listed companies (as of June 2021).

When it comes to **incentives for foreign investment**, the *Agence pour la Promotion des Investissements* (API) has been set up to promote domestic and foreign investment. It provides up-to-date information, mostly on its website, including investment opportunities in sectors with high levels of profitability, such as agriculture, livestock farming, energy and infrastructure. Additionally, there are fiscal incentives that include:

- Tax exemption on dividends paid by subsidiaries to their parent of up to 95% of the amount paid, and on capital gains (realized during exploitation) after commitment to reinvesting them in a WAEMU member State within three years from their realization;
- Tax exemption from industrial and commercial profit taxes on half or two-thirds of capital gains realized at the end of operation; and an exemption from the minimum flat-rate tax for any fiscal year in deficit during at least the first five years, among many others.

Moreover, when fully operational, the cross-border SEZ, located in Sikasso (Mali), Korhogo (Côte

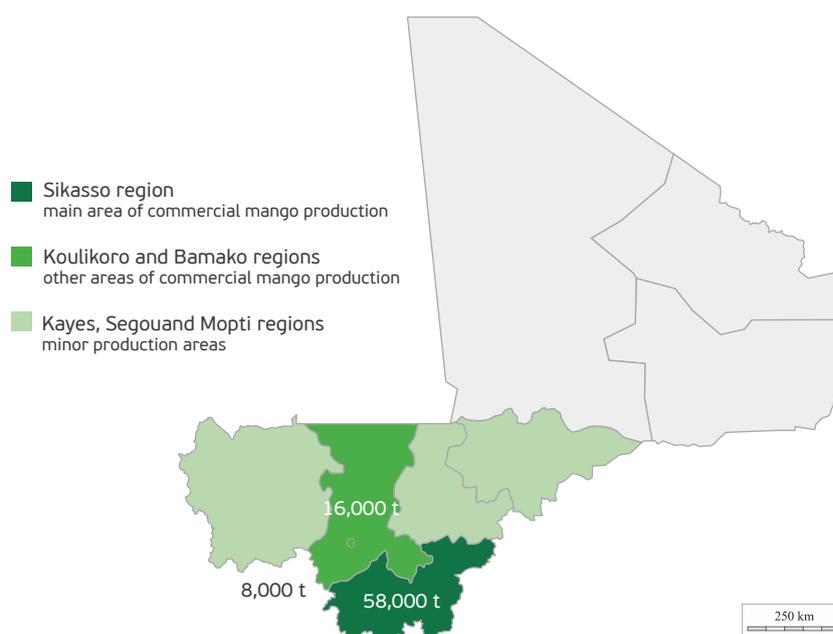
d'Ivoire) and Bobo-Dioulasso (Burkina Faso) will provide further incentives for both local and foreign investors. The project, whose legal framework is yet to be developed, is part of the ECOWAS Cross-border Initiatives Programme launched in 2005 with the aim to increase cooperation frameworks along intra-community borders.

Overall, the readily available skilled labour force and energy at a competitive cost, the economy's dynamism, strong government incentives, its pivotal cross-border trade position in the subregion and sound and open banking and financial system represent key elements Mali's attractiveness for foreign capital seeking favourable business destinations in West Africa.

MANGO IN MALI: AN OVERVIEW

Mango is the largest fruit crop in Mali, with approximately 100,000 hectares cultivated by more than 5,000 commercial mango farmers. According to the IFM, only 5%–15% of the production, estimated to be 350,000 tons, is commercialized. This low number is partly due to post-harvest losses (more than 35%), but also to the lack of outlet leading to unharvested mangoes lying under the trees. Nonetheless, Malian mango commercialization is growing by 9% per annum since 2015. In 2018–19, it increased by 17%, officially reaching 82,688 tons. Considering self-consumption, the total use exceeds 100,000 tons.

Figure 35: Mango production in Mali by region



Source: Consultant based on industry interviews.

Producers are mostly smallholder farmers with diversified crops, for whom mango represents an essential source of income, as it comes during the dry off season. Production is generally ensured by traditional orchards of 2–3 ha with an average planting density of 200 trees per ha. These plantations are mostly rain fed. Only a handful of commercial and professional orchards exist, of 20–100 ha, with a high planting density of 400 trees per hectare and drip irrigation in some cases.

Sikasso is Mali’s mango production stronghold, bordered by Burkina Faso and Côte d’Ivoire. In 2019, Sikasso generated 69% of the national production (58,000 tons), followed by Koulikoro at 19%

(16,500 tons) and Bamako (surroundings of the capital) at 9% (8,300 tons).

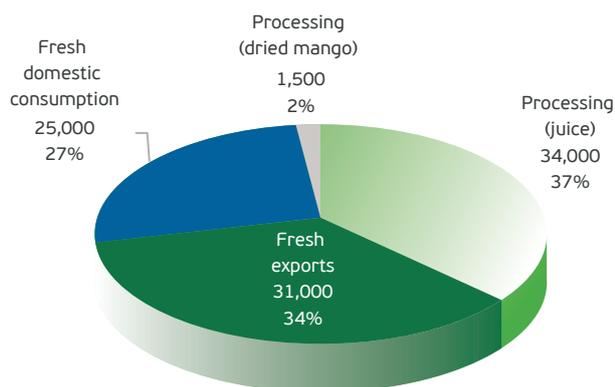
Depending on the rainy season, Mali’s mango production season is parallel or follows just after Côte d’Ivoire, between March and July, in all the producing regions. The main varieties are Amélie, Kent, Valencia and Keitt. Amélie is the earliest variety and starts production in March/April, followed by Kent in April/May and Keitt in May/June. There is also a small production window of local varieties from February to May, and even in December for some of them, although most local varieties do not meet export quality standards.

Table 13: Production and export calendar in Mali

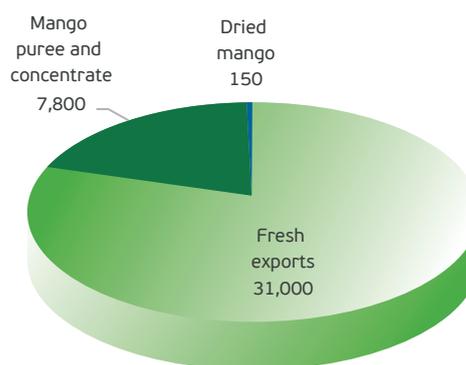
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Export season													
Production season													
Variété	Local varieties												
	Amélie												
	Kent												
	Valencia												
	Keitt												

Figure 36: Production outlet and quantity of exported mango from Mali (in tons)

Outlets of the marketed production (2019)

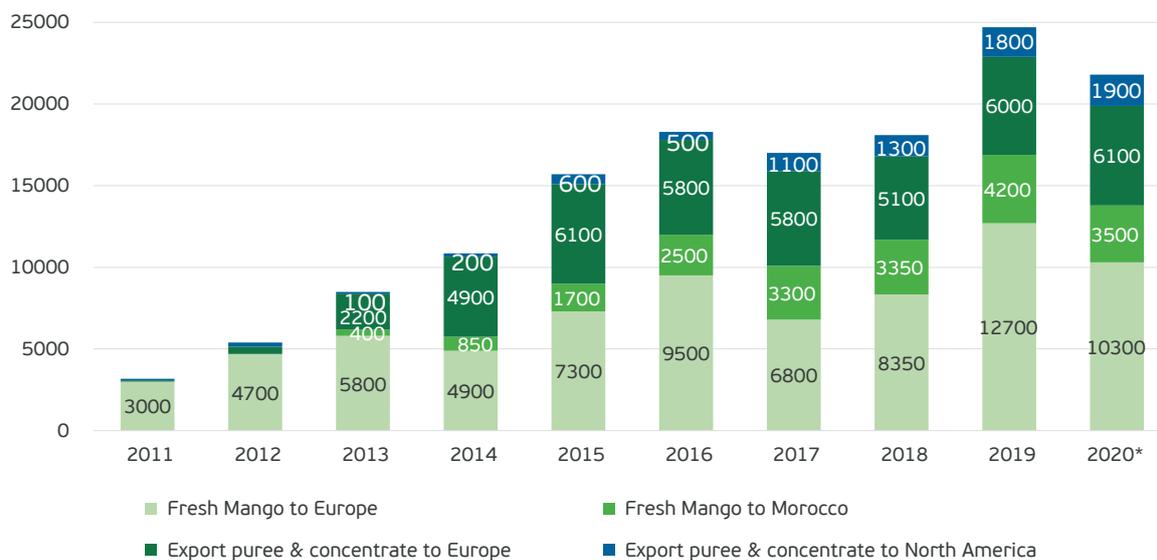


Exports of mango products from Mali (2019)



Source: Consultant, based on data from Interprofession Malienne de la Mangue (IMF).

Figure 37: Evolution of Malian mango exports (2011–20) (in tons)



Note: 2020 data is estimated on partial information already available.

Source: ITC Trade Map – mirror data.

In recent years, the biggest part of the commercialized production is estimated to go to the juice industry. Two main factories, ComaFruits and CEDIAM, absorb more than 30,000 tons of mango to produce juice (for the local market), puree and concentrate (for export outside of the subregion). The second main market is estimated to be export of fresh mango (half of it to neighbouring countries), then national urban consumption (estimated at 25,000 tons in recent years) and, finally, the drying industry, which is very small in Mali.

The main export destinations for fresh Malian mangoes are sub-Saharan Africa, Europe and Morocco. Flow to neighbouring countries of sub-Saharan Africa (mainly Mauritania, Senegal and Burkina Faso) are hard to estimate due to bad recording of those flows. The inter-profession estimates them to be 15,000 tons/year in recent years. Exports outside of Africa are much better recorded and presented in Figure 37.

As visible in Figure 37, both export of fresh and processed mango to the international market have grown fast in the last decade. Main destinations for fresh mango are European countries (the EU, United Kingdom, Switzerland, the Kingdom of Norway, and the Russian Federation Russia) and Morocco. Sporadic trades of a few containers also occurred in recent years (2019 and 2020) with the Republic of Turkey, the People’s Democratic Republic of Algeria and the United Arab Emirates, but remain limited. Export of mango puree and concentrate is mainly destined to the EU and Canada.

Exports (fresh and processed) are regularly increasing due to the international market’s growing demand and improvements in processing facilities. The average compound annual growth (CAGR) in the last decade was 18% for the export of fresh mango and 58% for the export of mango puree and concentrate. Even with the COVID-19 crisis in 2020, while fresh mango exports slowly decreased in comparison with the previous season, exports of processed mango continued to grow.

MANGO VALUE CHAIN AND STAKEHOLDERS

NURSERIES

Plant suppliers undertake the multiplication and grafting of different mango varieties. The number of nurseries is estimated at 3,000. They operate in Bamako and Koulikoro, and with a strong presence in Sikasso (in 2019, 96% of seedlings came from Sikasso), particularly in the village of Mandela, where mango and citrus tree nurseries are the main activity.

In 2016–20, 2.5 million mango seedlings have been sold per year, mostly for the Kent, Keitt and Amélie varieties. This quantity is enough to plant up to 12,500 hectares per annum.

PLANTERS/PRODUCERS AND THEIR ORGANIZATIONS

The number of mango farmers in Mali is estimated at 5,000–10,000. Most of them are smallholders with traditional orchards with low densities, low management and seemingly no inputs. There are also some commercial farmers and farming companies that use more intensive agricultural practices.

In Mali, most producers are part of a mango cooperative or association. Their local cooperatives are members of a federation, unions or groups. The main mango cooperatives are the Cooperative of Mango Producers (COPROMANG, Bamako), the Coopérative des planteurs et Maraîchers de Sikasso (CPMS, Sikasso), Union régionale des producteurs de mangues de Sikasso (URPMS, Sikasso), Union des Coopératives des Planteurs de Mangue de Yanfolila (UCPMY, Yanfolila), Association de Groupements de Planteurs et maraîchers de Kati (AGMK, Kati) and Groupements de planteurs et maraîchers dans les prefectures (GPMP).

COLLECTORS/TRACKERS

Trackers act as liaison between producers and exporters. On behalf of exporters, trackers are responsible for identifying producers, negotiating purchasing conditions, and supervising the fruit or harvest payment. They also oversee the collection, aggregation and logistics from the orchard to the packing station. Trackers can be divided into three categories:

- Some producers are also trackers. In addition to their harvests, they collect the harvest of their village and sell them directly to offtakers.
- In-house trackers are on the payroll of a single mango offtaker (exporter and/or processor). The offtaker provides the tracker with advances on payment at the start of the campaign.
- Independent trackers use their capital to source mangoes and sell to offtakers.

PROCESSORS

Mango processors in Mali mainly produce purees, concentrates, dried mango and juices. Puree and concentrates are in the hands of two private agribusiness processing companies (ComaFruits and CEDIAM) in Sikasso and Koulikoro, with capacities of 1,000–15,000 tons. The production is exported to Europe and North America.

Two dozen SMEs are active in mango drying, with processing capacities of 5–200 tons of dried mangoes per year. Mango juice and jams from several SMEs are processed by more than 100 artisanal processing units, but most are not financially sustainable and face quality issues.

EXPORTERS

There are approximately 30 Malian companies involved in mango exports. Mango exporters need to be registered at the Ministry of Industry, Investment & Commerce. Exporters are responsible for sorting, calibrating, palletizing, packaging and cold storage. Few exporters have their own packing house and cold rooms; most work with the Périmètre Logistique Aménagé en Zone Aéroportuaire (PLAZA) in Bamako and the Centre de Conditionnement de la Mangue et la Pomme de Terre de Sikasso (CCMPS) in Sikasso.

Exporters specialize by geographic destination and are grouped into three leading associations:

- Association Malienne des Exportateurs des Légumes et de Fruits (AMELEF) – the largest association in terms of membership;
- Association des Professionnels Exportateurs des Fruits et Légumes (APEFEL) – accounts for half of mango exports in terms of volume;
- Association des Jeunes Exportateurs (AJEX) – set up by and for young entrepreneurs.

Exporters work with freight forwarders who oversee export procedures and act as intermediaries between the administrative authorities and exporters by carrying out trade, customs and transport formalities both in Mali and abroad.

WAREHOUSING/STORAGE FACILITIES

There are two warehouses and storage facilities that meet international standards, with a combined potential capacity of approximately 10,000 tons of fresh mango per campaign: the Périmètre Logistique Aménagé en Zone Aéroportuaire (PLAZA) of Bamako and the Centre de Conditionnement de la Mangue et la Pomme de Terre de Sikasso (CCMPS) of Sikasso.

Both are joint investments of the Malian Government, the World Bank (WB) and the Kingdom of the Netherlands, and are managed by the IFM. As such, they are accessible to all members of the inter-professional association. A phytosanitary control officer of the Ministry of Agriculture is present in each centre for the inspection of mango pallets and the issuance of the phytosanitary certificate.

TRANSPORTERS AND LOGISTICIANS

Most exporters do not have a fleet of vehicles to collect and transport mangoes, and rely on companies that specialize in logistics and transportation. These companies also provide refrigerated containers (reefers) suitable for transporting mangoes over long distances while preserving the product's integrity. During the peak of the harvest season, reefers are challenging to get at affordable prices and in sufficient quantity. The scarcity of containers is explained by the high demand from exporters in Côte d'Ivoire, Senegal and Burkina Faso. As a landlocked country without a port, the transportation and logistics needs of Malian exporters are not prioritized.

TRANSPORTATION NETWORKS

In Mali, there are three modes of transport for the export of mango-based products: road, air and sea. Dried mango is mainly shipped by road to Burkina Faso and then exported abroad by companies based in Burkina Faso via the port in Abidjan. Mali is ranked 96th out of 160 countries on the 2018 Logistics Performance Index, which measures the capacity of countries to efficiently move goods and connect manufacturers and consumers with international markets.

All the exports to sub-Saharan Africa (except for Gabon, by air) and Maghreb are done by road. Roads are the main mode of transport in Mali, with a network of 89,000 km, of which 5,690 km are paved. Most secondary and tertiary roads are unpaved, in poor condition and often impassable during the rainy season, making access to orchards difficult via rural roads.

The ocean remains the most used mode of transport by Malian exporters, as it is well adapted when it comes to exporting a large quantity of fresh mangoes. Mali is a landlocked country and, therefore, does not have a seaport, forcing exporters to use road transport to bring products to a coastal country for export by sea. The port of Abidjan in Côte d'Ivoire is the most frequented by Malian exporters due to its proximity to production areas and to packaging centres where the fruits are sorted, cleaned, packed and refrigerated.

A small amount of fresh mango is shipped by airfreight via the Modibo Keita International Airport, but fresh mango shipped by air has decreased by 62% in the last three years.

INVESTING IN MANGO IN MALI: KEY FIGURES



Input supply

Number of mango plant nurseries within the country: 3,000 nurseries producing 2.5 million seedlings annually

Number of suppliers of fertilizer/ phytosanitary treatments within the country: 20

Number of suppliers of organic fertilizers/ phytosanitary treatment within the country: 10

Number of national manufacturers of mango packaging (cartoons and paper kraft cardboards, etc.): 1 factory starting in 2021.



Production

Estimated total production: 350,000 tons

Estimated commercial production: 100,000 tons

Number of commercial mango farms (with > 1 ha mango orchard): +/- 5,000 farms

Average yield of commercial mango farms: 5 tons/ha

Farm gate prices:
Min.: XOF 100/kg; median: XOF 150/kg;
Max.: XOF 175/kg



Marketing

Distance from main production area to airport: 350 km

Distance from main production area to port: 800 km

Number of available platforms/centres for cleaning/packaging/export: 2 (Sikasso and Bamako)

Number of exporting companies: 30

Volume of fresh export in 2020: 6,500 tons

Number of rejections in the EU in 2018: 32 containers rejected



Processing

Share of local processing (on the commercial production): 39%

Main process: Mango puree and concentrate for national and export markets

Number of industrial processing companies: 2



Investment indicators

Cost of land in rural areas: XOF 250,000 to XOF 500,000 (\$455–\$910) per hectare

Cost of land in urban areas: XOF 800,000 to XOF 1,500,000 (\$1,455–\$2,725) per hectare

Cost of power: XOF 120 /kWh (\$0.28//kWh)

Cost of unskilled workforce: XOF 40,000 (\$72) per month

Cost of skilled workforce: XOF 100,000 to XOF 250,000 (\$180–\$455) per month

Cost of transportation: Sikasso–Abidjan: XOF 145/kg (\$5,300/20' reefer)

Enabling Business in Agriculture (EBA 2019) score and rank: 33.7 (rank 88/101)

Doing Business (2020) score and rank: 52.9 (rank 148/190)

INVESTMENT OPPORTUNITIES IN MALI'S MANGO SECTOR

OPPORTUNITY 1: ORGANIC MANGO PRODUCTION

With the many ageing mango orchards, the accessibility and low cost of land in Mali and the uncommon use of chemicals, Mali is the perfect country for investing in organic mango production. The production can target the fresh export market as well as the processing sector, as the two main juice processing factories are already certified organic. The organic mango market is growing fast and generates a lot of value addition. Production schemes, including a part of self-production on large orchards and a part of outgrowing with smallholder farmers in a radius of a few tens of kilometres, could be adopted to create organic mango production clusters.

OPPORTUNITY 2: ORGANIC MANGO PROCESSING

The two existing processing companies are unable to meet the strong and growing demand for organic mango juice. There is a lot of room for other investors in this sector. Investors can take advantage of the already recognized 'origin/name' of Malian organic mango to take market shares in a fast-growing sector with high value addition. The availability of organic inputs in Mali, with several providing companies, is also a strong advantage for this sector in the country.

OPPORTUNITY 3: LOGISTICS AND PACKAGING FOR FRESH MANGO EXPORT

Transportation, storage, cooling and packaging infrastructure in Mali is still insufficient in comparison to the strong demand of the mango and more generally of the horticultural sector. Investing in such services with direct links with Abidjan and/or Dakar port infrastructure is a strategic and promising investment.

INVESTMENT AND MANGO SECTOR SUPPORT STRUCTURES AND PROGRAMMES

SUPPORT STRUCTURE

Interprofession Filière Mangué (IFM)

IFM is an association that regroups every actor of the mango value chain. Membership fees and a 2% levy throughout mango production and export chain finance the organization. The Agricultural Orientation Law supports the creation of inter-professions in Malian agricultural sectors.⁸⁸

The IFM was established in 2011 and aims to improve supply chain performance, competitiveness and market access. The IFM regroups nursery workers, mango producers, trackers, processors and exporters with regional representations, in Sikasso, Koulikoro and Bamako. Given its reach, the IFM is often a primary beneficiary of projects supporting the mango value chain, such as the World Bank's Programme Compétitivité et Diversification Agricole (PCDA) and the Unite de Mise en Oeuvre du Cadre Integre (UMOCI).⁸⁹

Agence pour la Promotion des Exportations (APEX)

Created by law N° 2011-032/AN - R.M. of 24 June 2011, APEX's mission is to develop the export of Malian goods and services. The agency's mandate is to:⁹⁰

- Organize promotional activities for Malian goods and services;
- Implement sector development programmes and sectoral export promotion strategies formulated by the government;
- Implement export incentive mechanisms;
- Provide producers and exporters with information on quality standards and market access conditions for goods and services;
- Support enterprises to increase and diversify goods and services for export;
- Conduct research and studies in the field of export promotion and disseminate the results;
- Establish certificates of origin for goods intended for export;
- Contribute to the collection, processing and dissemination of foreign trade statistics;
- Encourage and develop strategic partnerships to increase exports and promote Malian goods and services.

88 IFM Mali (2015).

89 PCDA (2009).

90 <https://agoa.info/images/documents/6187/strategie-agoa-mali.pdf>.

Agence Malienne de Normalisation et de Promotion de la Qualité (AMANORM)

AMANORM is Mali's national standardization body. It leads and coordinate work, studies and surveys in standardization, quality promotion, certification and accreditation. AMANORM is a member of ISO, the ECOWAS Standards Harmonization Model (ECOSHAM), the ECOWAS Quality Policy (ECOQUAL) and the WAEMU quality policy.⁹¹ Its primary functions are:

- Assist enterprises in the certification of their production systems and products;
- Assist laboratories, inspection and certification bodies in the accreditation process;
- Manage and disseminate all documentation related to standardization and the promotion of quality;
- Inform, assist and advise companies and laboratories in the fields of standardization, quality assurance, quality management, certification and accreditation;
- Undertake training and development activities in the areas of standardization, quality promotion, certification and accreditation;
- Create the national mark of conformity to standards and managing its use.

Centre pour le Développement du Secteur Agroalimentaire (CDA)

In 2011, the Malian Government adopted the Strategy for the Development of the Agrifood Sector and its 10-year action plan (2012–21). This strategy's implementation led to the CDA's creation in June 2013.⁹²

The CDA's mission is:⁹³

- Increase the managerial and commercial capacities of agrifood processing companies;
- Set up a database on the agrifood sector;
- Facilitate access to financing for agrifood companies.

Ministry of Agriculture's Office National de la Protection des Végétaux (ONPV)

The Ministry of Agriculture's central role in the mango sector via its ONPV consists in ensuring the application of national and regulatory texts related to phytosanitary control and mango training for inspectors on certification procedures. The office is also in charge of coordinating the Comité national de Surveillance et de lutte contre les Mouches des Fruits du Manguier (CNSL-MF), which provides technical information, advisory services, and training in the fight against fruit flies.⁹⁴ The committee comprises representatives of the Assemblée Permanente des Chambres d'Agriculture du Mali (APCAM), research institutes and Comité de Liaison Europe Afrique Caraïbes Pacifique (COLEACP).⁹⁵

Agence Nationale de la Sécurité Sanitaire des Aliments (ANSSA)

ANSSA is a public scientific and technological agency established under the Ministry of Health and Social Development, known as the National Food Safety Agency. Its mission is to:⁹⁶

- Coordinate all actions related to food safety;
- Provide technical and scientific support to the control structures;
- Ensure the technical and scientific support necessary for the elaboration of food safety regulations;
- Assess the health risks that could be posed by:
 - The processes and conditions of production, processing, preservation, transport, storage and distribution of food items;
 - Residues of veterinary, phytosanitary and fertilizer products and other contaminants;
 - Packaging and materials intended to come into contact with the elements as mentioned earlier;
 - Support the activities of surveillance systems and epidemiological networks.

Specifically, concerning the mango sector, ANSSA developed a self-check guide for Mali's mango sector.⁹⁷ The agency also provides support

91 <https://www.iso.org/fr/member/1915.html>.

92 https://www.lejecom.com/Mali-Un-centre-agroalimentaire-pour-developper-le-secteur_a2858.html.

93 <http://bamada.net/mali-centre-pour-le-developpement-du-secteur-agroalimentaire-le-projet-de-programme-dactivites-et-de-budget-2020-adopte-par-les-administrateurs>.

94 Final Report on an audit carried out in Malifrom 13 June 2017 to 22 June 2017 to evaluate the official control system for plants and plant products intended for export to the European Union.

95 <http://www.coleacp.org/fr>.

96 <http://41.73.116.155:8000/anssamali/index.php>.

97 http://www.ipcinfo.org/fileadmin/user_upload/codexalimentarius/CODEX50/ppt/CodexMali_50ans.pdf.

against sanitary and phytosanitary risks in Mali's mango export sector, consisting of mapping all mango orchards and identifying their owners by municipality. This will enable national authorities to trace each batch of mangoes' origin in case of an incident.⁹⁸

Institut d'Economie Rurale (IER)

The IER researches agricultural technologies and the fight against fruit flies via its stations in Koulikoro and Sikasso as part of the Comité National de Surveillance et de lutte contre les Mouches des Fruits du Manguier (CNSL-MF).

PROJECTS/PROGRAMMES

Unite de Mise en Oeuvre du Cadre Integre (UMOCI)

UMOCI is a World Trade Organization (WTO) initiative whose mission is to ensure the coordination of the actions of the administration, the private sector and civil society in the following areas:⁹⁹

- Initiate information, sensitization and training programmes for government, private sector and civil society structures to ensure their mastery of the Enhanced Integrated Framework Aid for Trade;
- Monitor the implementation of sectoral action plans and trade capacity-building programmes adopted by the Malian Government and its partners;
- Evaluate and monitor the integration of trade into the Poverty Reduction Strategy Framework.

Economic Community of West African States (ECOWAS)

ECOWAS set up a response plan in 2015 to support the regional fruit fly management and control plan in West Africa to monitor the level of fly infestation and issue early warnings by short messaging service (SMS) to producers and plant protection services of member states. These alerts are accompanied by advice on how to take effective fruit fly preventive measures. In 2014–18, the plan reduced the volume of fruit shipments damaged by fruit flies by 57%, which resulted in a 40% increase in mango exports from the ECOWAS area to Europe.¹⁰⁰

West Afrika Trade and Investment Hub (WATH)

WATH is a United States Agency for International Development (USAID) initiative. The hub contributes to this goal by building and working through a network of West African partners to develop trade and investment in targeted value chains at regional and global levels.¹⁰¹

Projet d'Appui à la Compétitivité Agroindustrielle au Mali (PACAM)

The Malian Government received \$30 million in investment from the World Bank to set up PACAM. The project supports the mango value chain's development in Sikasso, Koulikoro and Bamako.

In its mango value chain component, the project's objective is to increase mango processing and export, improve access to mango production areas, and strengthen institutional and implementation capacities. PACAM will contribute to capacity building to enable full development of growth potential, improve existing and future processing capabilities, and increase access to national, regional and international markets.

GIZ – Programme d'Appui au Sous-Secteur de l'Irrigation de Proximité (PASSIP)

PASSIP funds local irrigation systems that contribute to improving the economic and nutritional situation of farmers' organizations, associations and agricultural enterprises along various value chains.

GIZ – Centre d'Innovation Verte (CIV)

The CIV programme focuses on innovation in agricultural value chains. While addressing specific research problems in several crops, the mango intervention aims to develop integrated fruit fly management.

98 <http://www.sante.gov.ml/index.php/actualites/item/1468-rapport-final-de-l-agence-nationale-de-la-securite-sanitaire-des-aliments-anssa>.

99 <https://www.cirmali.org/structures%20au%20niveau%20national.html#>.

100 <https://www.afd.fr/fr/actualites/eradication-de-la-mouche-des-fruits-en-afrique-de-louest-lunion-fait-la-force>.

101 <https://westafricatradehub.com>.

Europe-Africa-Caribbean-Pacific Liaison Committee (COLEACP)

COLEACP was identified as the reference organization to support the development of sustainable agriculture in ACP countries in fruit and vegetables. The organization is a stakeholder in the Regional Plan for the Control of Fruit Flies in West Africa. The plan aims to reduce EU interceptions of mangoes from Mali due to fruit fly presence.¹⁰²

2SCALE

The 2SCALE programme relies on a business approach to improve rural livelihoods and food security in Africa. It works through public-private partnerships to accelerate the creation of inclusive businesses. The goal is to support smallholder farmers and private enterprises in integrating commercial agrifood value chains.¹⁰³

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¹⁰² <https://www.coleacp.org/?lang=en>.

¹⁰³ <https://www.2scale.org>.

SWOT OF MALI'S MANGO SECTOR

Figure 38: SWOT of Mali's mango sector

Production factors	Processing, conditioning, storage and packaging	Policies, certifications and quality management	Demand	Financing	Other
Strengths					
<ul style="list-style-type: none"> Favourable agroecological conditions Abundant land and water Young, growing and affordable labour force Varieties available (Keitt and Kent) well appreciated in all export markets 	<ul style="list-style-type: none"> Two large existing processors strengthen the value chain A cardboard factory currently being built <p>Geospatial factors</p> <ul style="list-style-type: none"> Strategically located with (seven) neighbours Main production basin is close to the port of Abidjan (Côte d'Ivoire) and processors of Bobo-Dioulasso (Burkina Faso) area 	<p>Member of WAEMU, ECOWAS and Organization for the Harmonization of Business Law in Africa (OHADA)</p> <ul style="list-style-type: none"> Favourable legislature for agriculture (agricultural orientation law) and investment (investment code) Low access tariffs to European and American markets 	<ul style="list-style-type: none"> Growing national market: mango is the main fruit consumed by both urban and rural consumers 		
Weaknesses					
<ul style="list-style-type: none"> Low level of training for nurseries Insufficient phytosanitary treatments to fight fruit flies <p>Post-harvest</p> <ul style="list-style-type: none"> Unavailability of adapted plastic harvest crates Poor inbound transportation: rural tracks in bad condition, making access to producing region costly and time-consuming, especially if rainy season is early (June) Poor outbound transportation: national road networks that lead to exporting neighbouring countries are progressively degrading 	<ul style="list-style-type: none"> Inadequate and lacking storage infrastructure (pre-cooling, cold rooms and reefers) Insufficient number of packing houses, poorly distributed geographically Lack of packaging materials Lack of adequate and diverse packaging, particularly for consumer products like juices and dried mango Expensive to import packaging Cost and availability of electricity 			<ul style="list-style-type: none"> Difficulties accessing affordable and adapted financing, be it for capital expenditure or working capital 	

Opportunities					
<ul style="list-style-type: none"> ▪ Potential intensification of mango orchards within the framework of climate protection funds ▪ IFM will increase coordination and efficiency along the mango value chain 	<ul style="list-style-type: none"> ▪ Potential for product diversification: frozen mango; chopped and individual portion; vinegar; chutney/ jam; kernel butter; ingredients for cosmetics use ▪ Adoption of renewable energies (such as solar dryers or biomass energy) to decrease dependence on the grid and fossil fuels 	<ul style="list-style-type: none"> ▪ Creation of a special economic zone (SEZ) for Sikasso–Korhogo–Bobo–Dioulasso (SKBO) ▪ Taking full advantage of AGOA to penetrate American market ▪ AfCEF (Africa Enterprise Challenge Fund) increases the competitiveness of exports towards Africa 	<ul style="list-style-type: none"> ▪ Growing local demand for mango juice currently unmet ▪ Diversification towards new markets like: Middle East, Tunisia, Algeria, the Russian Federation and Japan 	<ul style="list-style-type: none"> ▪ Creation of an investment and guarantee fund focused on the mango value chain to be managed by the IFM 	
Threats					
<ul style="list-style-type: none"> ▪ Ageing and destruction of orchards, and soil erosion ▪ Planters do not respect harvest start dates and are often caught off guard by narrowing of production window ▪ Lack of education of farmers ▪ Malian mango's quality reputation not good <p>Competition</p> <ul style="list-style-type: none"> ▪ Intense regional competition (price war threat) ▪ Latin American countries are becoming more and more aggressive in pursuing the EU market that West Africans countries dominated in the past ▪ Saturation of dried mango in EU markets by countries like Peru, Ghana, Burkina Faso and South Africa 		<ul style="list-style-type: none"> ▪ European standards are becoming stricter in terms of food safety (mainly fruit fly) 			<ul style="list-style-type: none"> ▪ Political instability and insecurity in Mali

3.4. BURKINA FASO

COUNTRY OVERVIEW

Burkina Faso, the ‘homeland of upright men’, is at the heart of West Africa. This large landlocked country shares borders with six countries, making it a naturally strategic transit point in the West African subregion.¹⁰⁴ The climate is divided into tropical, with a rainy season between May and September, mostly in the southern part, and Sahelian and dry in the northern part. The country is divided into 13 administrative regions and 45 provinces. Important cities, population-wise, are Ouagadougou, the capital (centre region, with a population of 1.1 million), Bobo-Dioulasso (Hauts-Bassins, south-east, with a population 360,106), Koudougou (Centre-Ouest, with 87,347 residents), and Ouahigouya (north, with 61,096 residents). Approximately 70 languages are spoken in the country, of which about 66 are indigenous (the dominant is Mossi, spoken by nearly half of the population). Diversity and openness are the trademarks of the country’s rich culture and welcoming people. Politics and governance are articulated around a presidential system and democratic principles of free and fair elections, and active participation of citizens in politics and civic life.

Burkina Faso – key facts	
Capital city	Ouagadougou
Area	273,600 km ²
Population, total	20.3 million
0–14 years	44.7%
15–65 years	52.9%
Youth literacy (15–24 years)	58.3%
Male	61.8%
Female	54.7%
GDP, nominal	\$15.7 billion
GDP growth, real (2014–19)	6.2%
FDI, inflows	\$208.0 million
Gross domestic private investment	\$4.1 billion
Employment to population ratio (+15 years)	62.3%
Employment to population ratio (15–24 years)	47%
Exports of G&S, 2014–19 (billion USD, 2019)	27.7% of GDP (4.06)
Main products	Pearls, precious stones and metals; cotton; edible fruits and nuts
Imports of G&S, 2014–19 (billion USD, 2019)	32.5% of GDP (5.01)
Main products	Mineral fuels and oils; vehicle; electrical machinery and equipment
Inflation	-3.2%
Bank credit to private sector	28.9% of GDP
Govt. expenditure	\$3.8 billion
Govt. revenue	\$3.1 billion
Total public debt	\$6.3 billion
Currency	CFA franc (XOF)
Languages	French (official), Mossi, Mooré, Dioula, Peul, Fulfuldé, Gourmantché

Note: Date is shown for the most recent years.

Source: World Bank, IMF, UNCTAD and Comtrade.

¹⁰⁴ ‘Subregion’ refers to West Africa, and ‘region’ to the whole continent.

A FAIRLY COMPETITIVE AND INNOVATIVE WEST AFRICAN ECONOMY

The 2019 Global Competitiveness Index ranks the economy's overall performance 130th globally, 26th in Africa and 10th in West Africa, with a score of 43.3/100.¹⁰⁵ Of the contributing factors, the country fares relatively well with respect to macroeconomic stability (2nd in West Africa), institutional quality (4th in West Africa), market size (6th) and the financial system (7th).

The Global Innovation Index, co-published by Cornell University, INSEAD, and the World Intellectual Property Organization (WIPO), positions the country at 118th in the world, 19th in Africa and 6th in West Africa, owing particularly to its enabling institutions and the extent of human capital adequacy and research capacity.

GOOD INSTITUTIONAL AND LEGAL FRAMEWORK

The World Bank's Governance Indicators rank Burkina Faso 106th worldwide, 12th in Africa and 4th in West Africa. This institutional performance rests on the relative low incidence and strong control of corruption (4th in West Africa), the extent of rule of law (5th) and government effectiveness (6th).

GOOD INFRASTRUCTURE QUALITY

The African Infrastructure Development Index ranks the country 30th on the continent for overall infrastructure development, and 7th in West Africa, with a score of 18.5/100. The road infrastructure is the 3rd most developed in the subregion and 16th in Africa. Furthermore, the quality of the logistics systems is 91st in the world, 10th in Africa and 3rd in West Africa, with an overall score of 2.62/5, according to the World Bank's Logistics Performance Index. More specifically, the country fares relatively well when it comes to arranging competitively priced shipments, the 2nd easiest in the subregion.

CONDUCTIVE ENVIRONMENT FOR DOING BUSINESS

The ease with which business is conducted in the country is ranked 151st in the world, 29th in Africa and 10th in West Africa, with an overall score of 51.4/100, according to the World Bank's Doing Business. Starting a business, dealing with construction permits and trading across borders are the business environment dimensions in which the country is better positioned against its subregional counterparts (at least 5th). Additionally, when it comes to *Forbes Magazine's* ranking of the Best Countries for Business, Burkina Faso comes 129th in the world, 23rd in Africa and 8th in West Africa. The ranking is based on its economic growth, level of development (GDP per capita), trade balance and population size.

INVESTING AND DOING BUSINESS IN BURKINA FASO

THE 4TH FASTEST-GROWING ECONOMY IN WEST AFRICA

Burkina Faso's economy has embarked on a strong growth trajectory. In the five years prior to the COVID-19 pandemic, the growth rate was 6.2% on average, the 4th largest in West Africa and 8th in Africa. The main drivers of this economic dynamism have been the mining sector (especially gold, which accounts for 12% of GDP and three-quarters of the country's total export earnings), and agriculture (mostly cotton, the country being the largest producer in the subregion). The ongoing pandemic has reduced growth to 2.0% in 2021, but the economy is forecast to recover faster, with GDP growth projected to reach 5.8% in 2021.

DOING BUSINESS MADE EASY AND AT REDUCED COSTS

Investors considering doing business in Burkina Faso will add to the growing trend of inward FDI. In the last decade, incoming flows have increased by 22% on average, the second-fastest growth in Africa, and reached \$208 million in 2019, with a cumulated stock of \$2.66 billion. Various factors contributed to the attractiveness of the economy and its business environment.

¹⁰⁵ For all the rankings used, the most recent data is considered.

Starting a business in Burkina Faso involves three procedures (the lowest figure across Africa):

- (1) Deposit subscribed capital of XOF 25,000 (\$45.5) in a bank or any other credit or microfinance establishment;
- (2) Have a public notary notarize the declaration of capital subscription and deposit the proof of capital deposit and declaration of capital subscription with the notary office; although the use of notary services are no longer required by law, most companies still use them;
- (3) Register at one of the many branches of the *Centre des Formalités des Entreprises* (CEFORE), the country's single window, for company registration, tax number (IFU), labour and social security; in July 2015, an e-registration was launched by CEFORE, called *Système Intègre des Guichets Uniques* (SIGU) and, since then, companies can register via an online portal. In practice, most entrepreneurs still prefer to do it over the counter at the CEFORE office.

The entire process takes approximately 13 days and costs \$48.8.

Acquiring or registering **property**, for business or residential purpose, requires four procedures, takes 67 days and costs 11.9% of the property value. Furthermore, obtaining **construction permits** involves 15 procedures, a maximum of 121 days and fees amounting to 7.6% of the warehouse value, with a standard warehouse priced at more than XOF 19.7 million (\$35,818.2) on average.

Equality of treatment between national and foreign investors is guaranteed by law for all administrative requirements, including acquisition or registering property, forest and industrial rights, concessions, administrative authorizations, access to permits or participation in state contracts.

Labour force is abundant and readily available, with 7.4 million active individuals. The World Bank's Human Capital Index ranks the measurement of the contributions of health and education to worker productivity 0.39/1. Investors can easily have access to foreign workers from the ECOWAS subregion and elsewhere, and these expatriate workers enjoy a similar treatment as their national counterparts.

Moreover, the **visa rule** allows foreign investors a duration of stay that spans that of their business activities, with no specific limitations.

Minimum wage is XOF 34,664 (\$63.0) per month. The average salary for the typical worker is XOF 331,000 (\$601.8) per month, and the highest average is XOF 1,480,000 (\$2,690.0), with actual maximum salaries being higher, depending on the skills and industry.

Electricity cost averages XOF 130.9 (\$0.24) per kWh, and it takes four days to get a connection. However, the access rate for the general population is low (14.4%).

Water supply for residential and business use is mostly continuous in urban areas. Access rate to at least basic water is estimated at more than 79%, against 43% in rural areas. Tariff grid ranges from XOF 407 (\$0.74) per cubic metre (for total monthly consumption of less than 15 cubic metres) to XOF 1,083.5 (\$1.97) (more than 100).

As far as **infrastructure** is concerned, there are an estimated 13,200 km of classified roads in Burkina Faso, of which 1,800 km are paved. There are highways linking the capital to neighbouring countries, such as the broad Dakar–Bamako–Ouagadougou–Niamey corridor. The country has two international airports: Thomas Sankara International Airport in Ouagadougou, which handles some 98% of all scheduled commercial air traffic in the country, and Bobo-Dioulasso Airport. Several regional carriers operate international services, including the parastatal Air Burkina, which has now been privatized. A third airport is under construction in Dossin and is expected to be operational by 2023. As a landlocked country, the nearest ports used for the country's international trade are located in Cote d'Ivoire, Ghana and Togo, with road corridor links to Ouagadougou. There is also a 1,260 km metre-gauge railway route between Burkina Faso (starting from Tambao, the most north-eastern part of the country, which has manganese deposits) to neighbouring Cote d'Ivoire (roughly 622 km are within Burkina Faso). Thanks to a modernization project agreed on in July 2019 between both countries (postponed due to the pandemic), freight capacity is expected to go from 800,000 to 5 million tons per year, and the number of passengers from 200,000 to 800,000 per year.

When it comes to **taxation**, companies are required to pay a standard corporate tax (27.5%), payroll tax (3%), social security contributions (16% of the gross salary paid), value-added tax (18%) and estate tax (0.1% on the value of the built or unbuilt property). In total, these business taxes and contributions amount to 41.3% of profits (and labour taxes and contributions represent 21.4% of commercial profits), and a total of 45 payments are made in a typical year. The tax structure also includes individual income tax ranging from 0% (monthly income less than XOF 30,000, or \$54.5) to 25% (more than XOF 250,000, or \$454.5).

Customs import duties are subject to the ECOWAS CET, and rates applied to the five tariff bands range from 0% (essential social goods) to 35% (specific goods for economic development). Further customs and excise duties include statistical royalty (1%), community solidarity tax (1%) and ECOWAS community tax (0.5%).

The **banking and financial system** is generally accommodating to business capital and financial needs. The system comprises approximately 18 banks of subregional, continental or international scope (up from 12 in 2011), and 129 microfinance institutions. Account ownership at a financial institution or with a mobile money service provider represents 43.2% of the population (ages 15+), and domestic credit to the private sector represents 28.9% of GDP.

The soundness of the banks is shown in their capital adequacy (capital to risk-weighted ratio at 12.7%) and assets portfolio quality (gross non-performing loans representing just 7.7% of total loans), as of mid-2019, according to the subregional central bank, the Banque Centrale des Etats de l'Afrique de l'Ouest.

The openness of the banking and financial system enables individuals and businesses to easily make cross-border **money and financial transfers** (in the form of remittances, for example) as well as maintain **foreign currency accounts**. Currency conversion is also readily available, both in formal and informal markets. The **fixed exchange rate** between the common subregional currency and the euro, at 655.96, reduces the risk associated with market fluctuations.

Additionally, there is an active **subregional stock exchange**, with 65 listed companies (as of June 2021), including FDI companies from various sectors (such as financial, banking, industry and transportation) that can raise capital easily.

Investor incentives include the country's two effective SEZs located in Ouagadougou and Bobo-Dioulasso, especially in opportunity filled sectors such as agribusinesses, which mostly transform products such as mango, corn and tomatoes, as well as the mining, energy and tourism sectors. The Agence Burkinabè des Investissements (ABI – National Agency for Investments), a member of the International Network of Francophone Investment Promotion Agencies (RIAFPI) and the World Association of Investment Promotion Agencies (WAIPA), is in charge of promoting investment, mostly from abroad. It provides valuable information to investors, such as specific details of the legal and institutional framework and investment and fiscal regimes.

Overall, strong growth and a stable macroeconomic environment in the general context of improving institutional quality and security are key contributing factors that make Burkina Faso one of the favourable subregional destinations for international investors.

MANGO IN BURKINA FASO: AN OVERVIEW

According to Association Interprofessionnelle Mangue du Burkina (APROMAB), the mango sector generates a turnover of more than XOF 15 billion per year. Mango remains the top fruit in Burkina Faso and constitutes 56% of national fruit production.¹⁰⁶ In 2017, mango was the 7th export product from Burkina Faso.

An estimated 33,700 ha, spread over eight provinces, are cultivated with mango trees, of which 1,255 ha are industrial orchards. Annual mango production is 150,000–250,000 tons/year in the last five years, and relies mostly on small-scale producers (15,000–20,000 farmers). In addition, the mango value chain includes 14 international exporters, 76 drying units, an industrial processing unit (DAFANI) and five pack houses. The value chain generates approximately 2,000 jobs outside producers.

Mango is mainly produced in the western regions of Burkina Faso: Boucle du Mouhoun (12,000 tons), Cascades (60,000 tons), Centre-Ouest (15,000 tons) and Hauts-Bassins (200,000 tons). The provinces of Kéné Dougou and Houet in Hauts-Bassins, followed by the Comoé in Cascades, are the main producing provinces. In Centre-Ouest, mango production is mainly located in the Sanguié and Boulkiemdé provinces. There are also new areas where orchards are being developed: Ziro and Sissili provinces in Centre-Ouest and Nahouri in Centre-Sud.

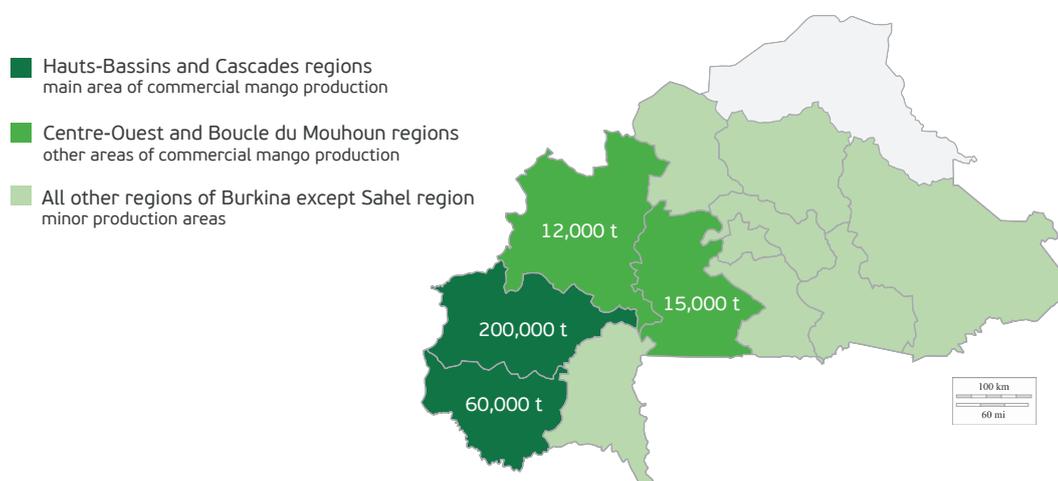
Mango varieties produced and exported from Burkina Faso include Kent, Amélie, Brooks, Keitt,

Valencia, Lippens and Springfels. In Hauts-Bassins and Cascades, the leading producing regions, the Lippens variety is the most widely cultivated (more than 35% of the acreage), as it is very appreciated by local consumers and is suitable for drying. The Amélie variety represents approximately 21% of the total number of trees, the Brooks variety 17% and Kent variety 4.5%.¹⁰⁷ Hauts-Bassins and Cascades have the highest yields and are specialists in plant production. Most orchards are multi-varietal, except in Hauts-Bassins, where 43.5% are of single variety. The Hauts-Bassins and Cascades regions are also the first in terms of mango plantation renewal, with average new plantation being every three years. Organic certification accounts for approximately 10% of the total annual production.

Mango harvesting in Burkina Faso is late February to early August. Amélie is an early, relatively small variety with a green/green-yellow skin. The harvest period for the Amélie variety is from the end of February to April, when Kent exports start. Kent is a larger variety, partially red when ripe, with a long shelf life. Due to the vagaries of the weather and fruit flies, late-maturing mango varieties are experiencing a shortening of the harvest period and cannot reach August (in the past 10 years).

Most of the annual production is consumed fresh locally; less than 20% of national production is processed into dried mangoes or juice/pulp, and fresh mango exports were approximately 3%–4% of national production in 2016–20.

Figure 39: Mango production by region in Burkina Faso



Source: Consultants, based on industry interviews.

¹⁰⁶ Office of Geography of Burkina (BGB).

¹⁰⁷ Rapport Inventaire des vergers du Burkina Faso, Direction Générale des Etudes et des Statistiques Sectorielles DGESS, APROMAB, DDC (2017).

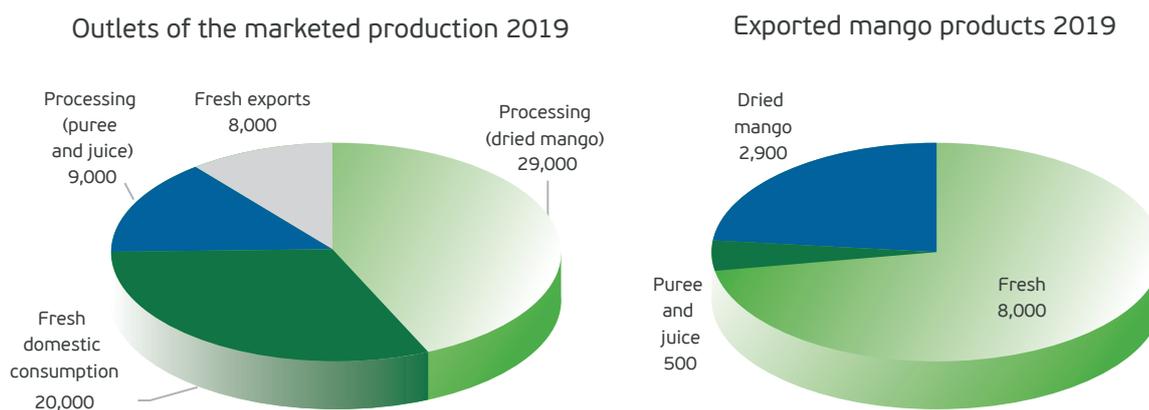
Table 14: Production and export calendar in Burkina Faso

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
		Production season											
Variété	Amélie												
	Lippens												
	Brooks												
	Kent												
	Keitt												
	Valencia												

Burkina Faso is the leader in West Africa's dried mango sector, and generated XOF 11.6 billion in 2020 (2,900 tons exported in 2020). However, the mango puree/juice industry has the greatest growth in the Burkinabè mango sector in recent years. It

generated XOF 4.32 billion in 2020, just behind fresh mango export (XOF 4.8 billion). Juice/pulp processing is led by a few industrial units ([DAFANI SA](#), Delicio, and Twellium Industries) and local artisanal units (Eva, Agro Déogracias, and Dioma).

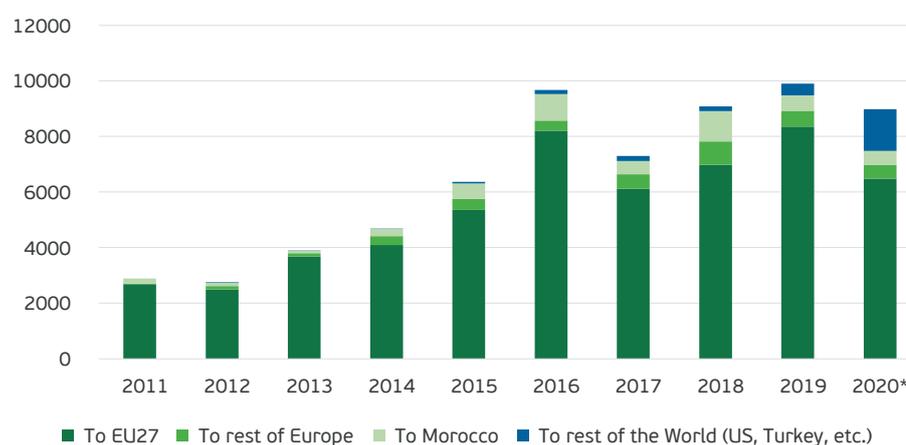
Figure 40: Production outlet and quantity of exported mango from Burkina Faso (in tons)



Source: Consultant, based on data from customs and industry.

Figure 41: Evolution of Burkinabè mango exports by product in 2011–20 (in tons)

Exports of dry, fresh and fresh cut mango from Burkina Faso by main destinations



Source: Consultants, based on ITC Trade Map data.

The main export destinations for fresh mango (mostly Amélie and Kent) are Western Europe (France, the Netherlands, Germany, Belgium and England) and West Africa (Niger and Ghana). Export of fresh mango is mid-February (with early variety Amélie) to June (with late variety Keitt). There are also continuous exchanges of fresh mangoes between Mali and Burkina Faso and Burkina Faso and Cote d'Ivoire based on the timing and the type of varieties.

Dried mango exports are April to December thanks to the construction of dried mango reconditioning centres and cold rooms. While Burkina Faso is a net exporter of dried mango, it should be noted that it imports 150 tons to 200 tons of dried mango from Mali and Côte d'Ivoire to be reconditioned and re-exported, making this country and the city of Bobo-Dioulasso the main mango cluster in the region. Mango juice and puree are also traded with neighbouring countries, though not quantified: mango pulp is imported from Mali and mango juice leaves Burkina Faso to other neighbouring countries. Mango juices are mainly consumed locally in urban areas and are sold in stores, restaurants, supermarkets and beverage outlets. Only 5% of dried mangoes produced in Burkina Faso are consumed locally (supermarkets, hotels and street vendors).¹⁰⁸

MANGO VALUE CHAIN AND STAKEHOLDERS

PRODUCERS

Mango is mainly produced by smallholders (estimated to be between 15,000 and 20,000) for approximately 33,000 ha. A large number of these producers are organized in cooperatives or producers' associations, which play a big role in marketing the harvests to the processing units. Alongside small producers, the Programme d'appui aux filières agro-sylvo-Pastorales (PAFASP) supported 1,000 ha of industrial plantations with irrigation in 2015. Approximately 10% of the national production is organic certified.

TRACKERS

Trackers can be individuals or formal/informal associations. It is a profession dominated by women, who work in collaboration with wholesalers, exporters and processing structures that are usually located in Bobo-Dioulasso, Banfora, Orodara and Ouagadougou. Fresh mangoes are transported in bulk or in cartons to the main consumption hubs (urban areas). Trucks ensure transport through the main corridors to serve the nine regions of low production. These trucks supply the orchards or the various fruit markets built in Bobo-Dioulasso, Banfora, Orodara, Sindou and Moussodougou. In these regions, fresh mango wholesalers resell the mangoes through reseller networks composed of women specialized in selling fruits. These fruits are displayed outdoors on tables in the street in cities for retail.

PROCESSORS

Four companies do industrial and semi-industrial processing of mangoes: [DAFANI.SA](#) (puree/juice), Délicio (juice), Twellium Industries (juice and soft drinks) and Timini SA (dried mango and coconut). A fifth industrial initiative with local capital is underway, but has not yet started. Apart from Délicio, all of these companies have more than XOF 2 billion turnover per year. DAFANI S.A has a mango pulp production capacity of 5,000 tons/year. All these companies experienced an improvement of their sales and turnover in the last three years and have been able to steadily invest in production tools and develop new products. Moreover, new foreign industrial investors have recently arrived with more ambitious schemes, aiming to offer a wider array of products.

[DAFANI.SA](#) and Timini SA get 80% of their raw material from independent producers and cooperatives, with the balance supplied by commercial intermediaries (trackers). Delicio obtains its supplies mainly through intermediaries, and Twellium buys puree from [DAFANI.SA](#), as well as puree industrialists from Mali for juice production.

Alongside the large companies, there are nearly 100 artisanal processing units producing dried mangoes or mango juice/puree. These companies can have very different profiles, from individual to limited liability companies and associations, and variable turnover (from XOF 5 million to more than XOF 500 million). These businesses use manual and labour-intensive techniques for drying and pressing processes. However, some upgrades have been noticed in recent years for some of them with the use of stainless steel materials and the integration of HACCP principles. Dried mango production capacity ranges are 30–50 tons/year for the small cooperatives (COOPAKE, and UPROMABIO) to 700–800 tons/year for bigger organizations (GEBANA, and Timini SA).

EXPORTERS

Burkina Faso has seven fruit pack houses, most of them located in Bobo-Dioulasso and Banfora (Sanlé Séchage Export, Ranch du Koba, Société de gestion des terminaux fruitiers (STGF), Fruiteq, HOUET Select, BoniFruits, etc.). More than 10,000 tons of fresh mango transits from these packing centres to Europe and North Africa. These facilities are built or managed by private owners or concessionaires chosen by the government, and they provide services to more than 20 amateur exporters from Burkina Faso. After the mango campaign, the conditioning infrastructures are used for cashew kernels and for fresh vegetables (potatoes and onions, etc.). Fresh mango export capacity ranges from 200–300 tons/year for smaller organizations (FASO MANGORO, and GTT export) to 1,500–3,000 tons/year for bigger ones (STGF, and Ranch du Koba). Some fresh mango exporting companies also dry mango for the international market (Ranch du Koba, Agro Burkina, Sanlé Séchage Export, Burkinature, and FASO MANGORO).

MANGO SECTOR ORGANIZATIONS

Association Interprofessionnelle Mangue du Burkina (APROMAB) is the umbrella organization for the three organizations that bring together producers (Union Nationale des Producteurs de la Mangue du Burkina), processors (La Professionnelle de la Transformation de la Mangue du Burkina

– PTRAMAB) and exporters (Association des Producteurs et Exportateurs de la Mangue du Burkina – APEMAB). The role of these sectoral organizations is to defend the interests of their members, and to create and share information and strengthen the capacities of members. Since 2014, APROMAB has successfully organized the mango assessment workshop that collects and validates data on the mango sector.

PUBLIC SERVICES

The Chambre de commerce et d'industrie du Burkina Faso (CCI-BF), which is a consular body, supports the State and actors by advocating to facilitate administrative procedures. It also develops structuring projects for the sector (cluster development, training programme and management of competitive funds for the sector).

INFRASTRUCTURE

Burkina Faso being a landlocked country, the main ports used are the ports of Abidjan (Côte d'Ivoire), Lomé (Togo), Tema (Ghana) and Cotonou (Benin). The main airports used are in Bobo-Dioulasso and Ouagadougou, all within Burkina Faso territory. Some exporters use the more developed Bamako (Mali) airport for airfreight.

There is a dry port in Bobo-Dioulasso, and all industrial and semi-industrial companies rely on truckers' services to transport the raw material and their final products. The three main transport corridors to connect Burkina Faso to the coast are Tema (Ghana), Lomé (Togo) and Abidjan (Côte d'Ivoire). Burkina Faso's transit corridors are among the most expensive and slowest in the world, and the proliferation of procedures associated with weak transport infrastructure has made the corridors non-competitive. The presence of trucking monopolies at ports of entry further adds to transportation costs through inefficient services.

Cold storage rooms are available near Ouagadougou and Bobo-Dioulasso airports in order to facilitate the storage of fresh products as well as their export and import. Some cities, such as Loubila, also have cold storage (4,080 m² and 1,760 tons) newly built by the State. In order to enable mangoes to reach these points, government and private sector actors built secondary infrastructures in the production areas. These are the decentralized fruit markets in Orodara, Sindou, Banfora, Moussodougou and Bobo-Dioulasso. The fruit market in Bobo-Dioulasso is the largest and most animated.

INVESTING IN MANGO IN BURKINA FASO: KEY FIGURES



Input supply

Number of mango plant nurseries within the country: 70 nurseries on 6 ha spread across three regions (Hauts-Bassins, Cascades and Centre-Ouest).

Number of suppliers of fertilizer/ phytosanitary treatments within the country: 10

Number of suppliers of organic fertilizers/ phytosanitary treatment within the country: 2

Number of national manufacturers of mango packaging (cartoons and paper kraft cardboards, etc.): 1



Production

Estimated total production: 150,000 tons

Estimated commercial production: 66,000 tons

Number of commercial mango farms (with >1 ha mango orchard): +/- 200

Average yield of commercial mango farms: 5 ha (small farms) to 15 ha (big farms)

Farm gate prices (export varieties):
Min.: XOF 40/kg; median: XOF 75/kg;
Max.: XOF 100/kg



Marketing

Distance from main production area to airport: 350 km

Distance from main production area to port: 800 km

Number of available platforms/centres for cleaning/packaging/export: 5

Number of exporting companies: 17

Volume of fresh export in 2020: 39,000 tons

Rejection rate of fresh mango in the EU in 2020: 9%



Processing

Share of local processing (on commercial production): 57%

Main process: Dried mango for diversified export market

Number of industrial processing companies: 5



Investment indicators

Cost of land in rural area: XOF 500/m² (\$9,101.7/ha)

Cost of land in urban area (industrial zone): XOF 15,000/m² (\$270,000/ha)

Cost of power (peak hour): XOF 118 /kWh (\$0,214//kWh)

Cost of power (non-peak hours): XOF 53 /kwh (\$0,096/kwh)

Cost of unskilled labour: XOF 35,000/month (\$63,71/month)

Cost of skilled labour: XOF 200,000 /month (\$364/month)

Cost of transportation: Bobo-Dioulasso–Abidjan: XOF 115 /kg (\$4,200/20' reefer container)

Enabling Business in Agriculture (EBA 2019) score and rank: 35.3 (rank 87/101)

Doing Business (2020) score and rank: 51.4 (rank 151/190)

INVESTMENT OPPORTUNITIES IN BURKINA FASO'S MANGO SECTOR

OPPORTUNITY 1: INNOVATIVE PRODUCTION SCHEMES

In the context of a dynamic exports and processing sector in Burkina Faso, investment in innovative production models with a part of self-production on modern and large orchards and a part of outgrowing with smallholder farmers in a radius of a few tens of kilometres around the plantation can be an excellent investment. The main plantation can be used as a training/demonstration centre to upgrade the production and harvesting skills of the small farmers as well as a platform for sorting and packaging before export and delivery to processing plants.

OPPORTUNITY 2: VALORIZATION OF MANGO BY-PRODUCTS AND WASTE

With the strong growth of mango processing in Burkina Faso, the quantity of mango waste has been growing fast. Mango rejections, peels and kernels are almost always evacuated as waste, while they could be used for energy production purposes in a landlocked country with high fuel costs. Investing in waste/by-product valorization could be fruitful and could help strengthen and diversify Burkina Faso's dynamic mango industry ecosystem.

OPPORTUNITY 3: EQUIPMENT AND MAINTENANCE SERVICES

Supply of processing equipment and maintenance services for the growing processing sector is a great opportunity in Burkina Faso. While the sector is already quickly growing, most of the processing equipment and maintenance services are imported individually by processing companies. Supplying such equipment locally could be very lucrative. In addition, Burkina Faso's position in the centre of the subregion would allow such companies to easily sell their equipment and maintenance services in neighbouring countries (Ghana, Côte d'Ivoire, Mali, Togo and Benin).



INVESTMENT AND MANGO SECTOR SUPPORT STRUCTURE AND PROGRAMMES

Table 15: Investment and mango sector support in Burkina Faso					
Structures	Status	Description	E-mail	Phone	Location
APEX	Public	Burkina Faso's export promotion agency	info@apexb.bf	(+226) 25311300/01	Ouagadougou et Bobo Dioulasso
CCI-BF	Public/private	Chamber of commerce and industry	info@cci.bf	(226) 25 30 61 14/15 (226) 25 31 12 66/67	Siège Ouagadougou, Avenue de Lyon 01 BP 502 Ouagadougou 01
Agence Burkinabè des Investissements (ABI)	Public	Burkina Faso investment agency	info@investburkina.com	(+226) 25 37 44 49	Ouagadougou
Association Interprofessionnelle Mangue du Burkina (APROMAB)	Private	National business sector association	apromaburkina@yahoo.fr	(+226) 20 98 09 89 (+226) 78 83 59 00 (+226) 64 51 19 63	Bobo-Dioulasso
Agrodev Services	Private	Business plan studies and soft advice Promotion of incubators	adsburkina@gmail.com	(+226)64316837	Bobo-Dioulasso
Centre for the Promotion of Imports (CBI)	Public	Markets studies and coaching programme		+31 (0)88 60 24300	Amsterdam P.O. Box 93144 2509 AC The Hague The Netherlands Visiting address Prinses Beatrixlaan 2 2595 AL The Hague The Netherlands
Projet de Résilience et de Compétitivité Agricole (PReCA)	Public programme	Agricultural resilience and competitiveness project funded by World Bank		(+226) 25 37 47 00	Ouagadougou
Le programme d'Appui à la Promotion de l'Entrepreneuriat Agricole (PAPEA)	Swiss agency	Programme including mango	Pour informations burkinafaso@helvetas.org Nikolaas Pater nikolass.pater@helvetas.org Website: www.helvetas.org/burkinafaso	(+226) 55 70 50 56	Ouagadougou
Comité de Liaison Europe Afrique Caraïbes Pacifique (COLEACP)	Private European fruits agency	Develop inclusive, sustainable trade in fruit & vegetables and food products, focusing on the ACP countries	Coleacp.org	+33 (0)1 41 80 02 10 +32 (0)2 508 10 90 +254 721 739 677	Brussels Paris Nairobi

SWOT OF BURKINA FASO'S MANGO SECTOR

Figure 42: SWOT of Burkina Faso's mango sector

Mango production	Post-harvest and processing	Marketing	Organization and structuring	Services
Strengths				
<ul style="list-style-type: none"> Good spread of production (from February to September) High potential to increase production, due to ongoing programmes for orchard renewals 	<ul style="list-style-type: none"> Experienced sector in dried products Existence of specialized equipment manufacturers in Burkina Faso Cheap labour Existing potential for fresh mango and mango products exports Good concentration of certified packaging facilities in Bobo-Dioulasso, Banfora and <i>Orodara</i> (production areas) 	<ul style="list-style-type: none"> Growing demand in the European market and in the subregion Burkina's export season ahead of competing origins Rehabilitation of the fruit terminal and the potential for the sale of products via Abidjan Dynamic exporting sector Good knowledge of market requirements 	<ul style="list-style-type: none"> Clear legislative framework Existence of professional group structures Availability of actors to comply with the regulatory provisions relating to professional organizations 	<ul style="list-style-type: none"> Presence of service providers in the various fields led by the actors of the mango sector
Weaknesses				
<ul style="list-style-type: none"> Extensive method of production, old and small orchards Low access to agricultural inputs and materials Low proportion and irregular production of coloured varieties (25%) for export High cost of certification 	<ul style="list-style-type: none"> Poor mastery of harvesting and post-harvest techniques Low availability of storage facilities for fresh mango Expensive and difficult to find packaging on the market (VAT on packaging) High cost of glass or polyethylene terephthalate (PET) packaging for juices and jams (more than 40% of turnover) Lack of market knowledge for processed mangoes, both for the domestic market and for export (demand, quality requirements and competitiveness compared to other origins) High cost of packaging centres and cold room storage 	<ul style="list-style-type: none"> Cost of arbitrary tolls and/or taxes along the road penalizes traders who want to reach markets High cost of packaging for export (because it is subject to VAT) Difficulty for operators to comply with EU legislation High cost of export logistics Insufficient commercial prospecting Lack of marketing strategy 	<ul style="list-style-type: none"> Lack of trust between actors Very weak institutional and management capacity of professional organizations Weak technical management capacity of the organizations set up Weak contractualization between actors 	<ul style="list-style-type: none"> Insufficient financing of the sector Lack of specific and global information on the sector Low level of research and extension support for the improvement of production techniques and plant material
Opportunities				
<ul style="list-style-type: none"> High potential for organic certification 	<ul style="list-style-type: none"> Openness of stakeholders to experiment with new technologies 	<ul style="list-style-type: none"> Growing organic market in Europe 		<ul style="list-style-type: none"> Beginning of the structuring of service providers
Threats				
<ul style="list-style-type: none"> Pests and diseases (fruit fly and mealybug) Farm gate price fluctuation 		<ul style="list-style-type: none"> Strong fresh mango exports competition from other West African countries 		

3.5. GHANA

COUNTRY OVERVIEW

Ghana, whose motto is 'Freedom and Justice', is located between Cote d'Ivoire in the west, Burkina Faso in the north, Togo in the east and the Gulf of Guinea in the south. Ghana's documented history dates back to the eleventh century. Since then, various kingdoms and empires have emerged, the most powerful and well-known being the Kingdom of Dagbon and the Ashanti Empire. The colonial period started in the fifteenth century, first with the Portuguese, then other European powers, and finally with the British. The latter divided Ghana into four separate British colonial territories: Gold Coast, Ashanti, the Northern Territories and British Togoland. These territories were unified when the country gained independence in 1957 (initially as an independent dominion within the Commonwealth of Nations). Since April 1992 when the country adopted a new constitution, an increasingly democratic, peaceful and stable subregional power has emerged within the political framework of a presidential constitutional democracy with a parliamentary multi-party system.¹⁰⁹

The country's location only a few degrees north of the equator is synonymous with a warm climate. Temperatures culminate at 30°C–31°C between December and March, corresponding to the harmattan (dry desert wind) blowing in the north-east of the country. The south enjoys a tropical climate with a longer rainy season (March to November).

Most of the 31 million Ghanaians (57%) live in urban areas, mostly in Accra (a population of 5.1 million), Kumasi (3.3 million), and Tamale (0.5 million). The richness of the culture and traditions rests in part on the warmth, friendliness and a strong sense of community of the people, as well as approximately 50 local languages, of which the 11 most widely spoken are taught in school (e.g. Akan, Ewe, Ga, Dagaare and Dagbani). This is in addition to English, Ghana's official language.

Ghana – key facts	
Capital city	Accra
Area	227,540
Population, total	30.4 million
0–14 years	37.4%
15–65 years	59.5%
Youth literacy (15–24 years)	92.5%
Male	92.8%
Female	92.2%
GDP, nominal	\$67 billion
GDP growth, real (2014–19)	6.1%
FDI, inflows	\$2.3 billion
Gross domestic private investment	\$9.6 billion
Employment to population ratio (+15 years)	64.9%
Employment to population ratio (15–24 years)	37.5%
Exports of G&S, 2014–19 (billion USD, 2019)	36% of GDP (24.1)
Main products	Pearls, precious stones and metals; mineral fuels and oils; cocoa
Imports of G&S, 2014–19 (billion USD, 2019)	35.4% of GDP (23.7)
Main products	Vehicles; electrical machinery and equipment; cereals
Inflation	7.2%
Bank credit to private sector	12.4% of GDP
Govt. expenditure	\$14.6 billion
Govt. revenue	\$9.6 billion
Total public debt	\$42.3 billion
Currency	Cedi (GHS)
Languages	English (official), Akan, Ewe, Dagbani, Dangme

Note: Data is for the most recent years, since 2017.

Source: World Bank; IMF; UNCTAD; Comtrade.

109 'Subregion' denotes West Africa throughout the text, while 'region' refers to the whole African continent.

MOST COMPETITIVE ECONOMY IN WEST AFRICA

Globally, Ghana comes 111th in the 2019 Global Competitiveness Index, and 8th on the continent and 1st in West Africa, with an overall score of 51.2/100. This performance owes to its strong institutions and the largest extent of ICT adoption in West Africa, in addition to the depth of skills and innovation capacity where the country ranks 2nd in the subregion.

AMONG THE MOST INNOVATIVE AFRICAN ECONOMIES

Ghana is the 108th most innovative economy in the world, the 13th in Africa and the 3rd in West Africa, according to the 2020 Global Innovation Index (co-published by Cornell University, INSEAD and the World Intellectual Property Organization), with an overall score of 22.3/100. The contributing factors are a supportive infrastructure network and the extent of creative outputs, in which the country ranks 2nd in the subregion.

STRONG INSTITUTIONS

The strength of the political institutions is indicated by the World Bank's Governance Indicators, which rank Ghana 100th in the world, 11th in Africa and 3rd in West Africa. The country comes 1st in West Africa for regulatory quality, 2nd for rule of law, control of corruption and voice and accountability, and 3rd for political stability and no violence, and government effectiveness.

HIGH-QUALITY INFRASTRUCTURE

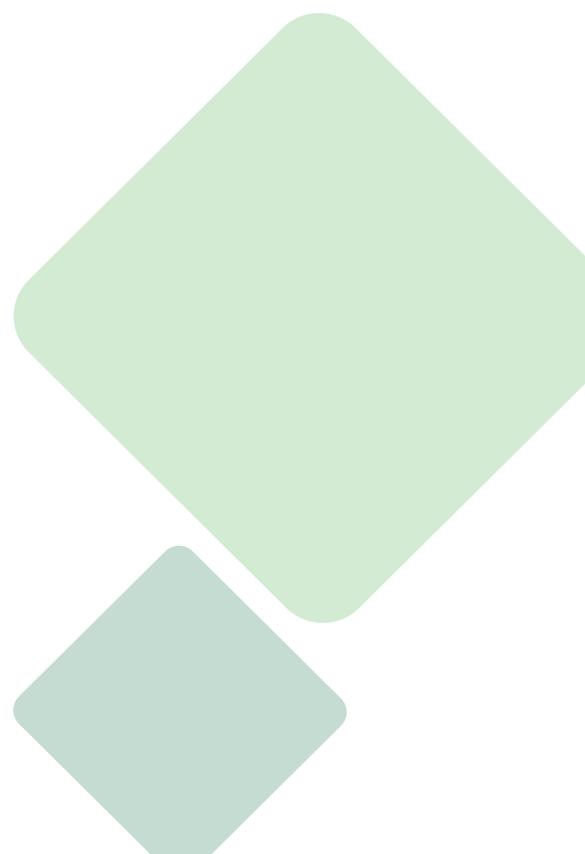
The African Development Bank's survey on infrastructure ranks the country 11th in Africa and 2nd in West Africa, with an overall score of 30.1/100. Water supply and sanitation, as well as transport appear to be the most developed segments of the country's overall infrastructure. Furthermore, the World Bank's Logistics Index puts the country at the 106th position worldwide, 16th in Africa and 5th in the subregion. The overall score is 2.57/5. The country comes 2nd in West Africa when it comes to the competence and quality of logistics services, and 3rd for the efficiency of customs clearance process.

STRONG MARKET POTENTIALS AND LOWEST COUNTRY RISK IN WEST AFRICA

According to the 2020 Market Potential Index, developed by the Michigan State University's International Business Center, Ghana is ranked 76th globally, 5th in Africa (with the Federal Democratic Republic of Ethiopia, the United Republic of Tanzania, and Morocco) and 3rd in West Africa. The contributing factors are the extent of economic freedom (the highest in West Africa), market receptivity (the strongest in the subregion) and country risk (the lowest in the subregion).

THE BEST COUNTRY FOR BUSINESS IN WEST AFRICA

Ghana is considered the 94th Best Country for Business worldwide, 9th in Africa and 1st in West Africa, according to *Forbes Magazine*. This performance is a combined result of the country's GDP growth, GDP per capita, trade balance and population size. In addition, the World Bank ranks the country 118th globally, 17th in Africa and 3rd in the West African subregion when it comes to the ease of which business is conducted, with a score of 60/100. The dimensions that stand out relate to getting credit (the easiest in West Africa) and protection offered to minority investors (the 2nd strongest).



INVESTING AND DOING BUSINESS IN GHANA

STRONG AND RESILIENT ECONOMY

Ghana's economy is the second largest in West Africa, and has enjoyed a robust growth averaging 6.1% in the last five years in the context of increasingly favourable macroeconomic and financing conditions. Large endowments of gold (Africa's biggest gold miner after South Africa), cocoa (world's second largest cocoa production) and, more recently, oil form the cornerstone of Ghana's economy have contributed to the economic boom. However, the ongoing COVID-19 pandemic has reduced growth to 0.41% in 2020, compared to the initial projection of 5.8%, as a result of 'lower oil production, weak global aggregate demand, global supply chain disruptions, and a steep decline in international travel, trade and retail and hospitality services'. However, the economy is expected to rebound in 2021, with a projected growth rate of 5.9%, suggesting a relatively strong resilience of the economy (the country is considered as the most resilient economy in West Africa, according to the 2018 African Attractiveness Index).

FRIENDLY AND LOW-COST BUSINESS ENVIRONMENT

Starting a business is among the least costly in Africa, with a paid-in minimum capital requirement of just 100 GHS (\$17) and fees amounting to 390 GHS plus 0.5% of the stated capital as a commencement tax. The process involves eight procedures:

- (1) Obtain a tax identification number (TIN) from the Registrar-General's Department (RGD) or Ghana Revenue Authority; although necessary to obtain before proceeding with the registration, it can be done at the time of the business registration by submitting the forms and required documents at the RGD; once validated, the applicant can collect the document;
- (2) Check for availability of company name and submit company documents to obtain business operation permit and incorporation certificates at the RGD; applicants can request the search to be performed at the Companies Registry to ascertain the availability of the proposed name; the RGD can then reserve the name pending registration of the company;
- (3) A Commissioner of Oaths, within the RGD, authenticates forms required for the certificate to commence business;
- (4) Obtain, within 28 days, the certificate to commence business, the certificate of

incorporation and temporary business operating permit certificates, all from the RGD;

- (5) Receive inspection of work premises by the Metropolitan Authority, which has already automatically received information on the registered business (address and phone number); a visit is then scheduled to confirm the category of the business;
- (6) Obtain final business operating permit upon payment of fees related to the permit at the Metropolitan Authority;
- (7) Deposit the 100 GHS minimum paid-in capital in a bank account and the following documents are requested: copies of company regulations, the certificate of incorporation, the certificate to commence business and signatures of the authorized company representative; some banks may conduct physical inspection of the company's address, and most require introductory letters from the solicitors in order to open an account, as part of the 'KYC' (know your customer) procedures;
- (8) Apply for social security at the Social Security and National Insurance Trust office; to do so, the company must provide a list of its employees, their respective salaries and social security numbers, and the company's certificate of incorporation.

These procedures take approximately 13 days to complete, well below the 21.5 sub-Saharan African average.

Furthermore, obtaining **construction permits** is also among the cheapest in West Africa, with an estimated cost of 3.5% of the warehouse value. For a standardized warehouse, the estimated value is 495,380 GHS (\$84,215). **Registering property** involves five procedures, from obtaining a title transfer form to the issuance of title certificate at the Land Registration Division of the Lands Commission. The procedures take 33 days at a cost of 6.1% of the property value.

The rental price of a typical four-bedroom exclusive residential house is approximately 26,470.6 GHS (\$4,500) per month. For non-residential properties, the price ranges from 58.8 GHS (\$10) per square metre per month for industrial property to 235.3 GHS (\$40) for retail space and 205.9 GHS (\$35) for an office space.

Equal treatment is guaranteed by law to national and foreign investors when it comes to all business-related procedures, including the acquisition,

registration or rental of any property.

The **labour force**, estimated at 12.9 million, is relatively skilled and vibrant. The country tops the World Bank's Human Capital Index in West Africa, with a score 0.44/1, which is suggestive of a large variety of relatively strong skill sets. **Visa rules** applied to investors and workers, similar to those in the ECOWAS region, grant a duration of stay that matches that of the business or the employment, with no further limitations.

The minimum **wage** is \$45.1 per month. Salaries typically range between 1,280 GHS (\$218) and 22,600 GHS (\$3,842), depending on the skills and industries, and the average worker earns 5,070 GHS (\$862) per month. These payments include housing, transport, and other benefits such as social security and pensions.

The country's **electricity system** is ranked 1st in the subregion by the World Bank (5th on the subcontinent), largely as a result the reliability of supply and transparency of tariffs. Obtaining a connection takes a typical business approximately 55 days, and the process involves hiring a registered electrical contractor and receiving an internal wiring inspection, submitting an application to Power Distribution Services Ghana Ltd, receiving site inspection by Power Distribution Services Ghana Ltd and awaiting estimate, and then receiving external works, meter installation and electricity flow. Total fees are 62,619.4 GHS (\$10,645.3). Once connected, businesses pay a price of 1.39 GHS (\$0.24) per kWh.

Water connection can be obtained within a month from Ghana Water Company Limited, at a total cost of 1,000 GHS (\$170). At an average cost of 4 GHS (\$0.68) per cubic metre applied to the bi-monthly consumption, basic drinking water services are accessible to more than 80% of the total population (93% in urban areas).

Business **tax and mandatory contributions** in Ghana include a corporate income tax (statutory rate of 25%), social security contribution (13% of employees' gross salaries), value-added tax (12.5%), tax on interest earned (8%), and contribution to the Ghana Education Trust Fund Levy (GETFL) and National Health Insurance Levy, municipal tax, fuel tax, and property tax at variable rates. These eight business-related taxes and contributions necessitate 36 payments in a typical year, take approximately 226 hours per year and cost an average of 55.4% of corporate profit.

In addition, individual income tax is 0% (annual chargeable income of less than 3,456 GHS – \$587.5 GHS) to a maximum of 30% (240,001 GHS – \$40,800.2 and more).

The **infrastructure network** is relatively dense and varied. There were 72,381 km of road network in Ghana in 2017, with 14,873 km being trunk road (used for long-distance travel), 15,463 km being urban roads and the remaining 42,045 km being feeder roads (turnpikes).

With more than 3 million passengers in 2019 and more than 23 passenger and cargo airlines, the Kotoka International Airport in Accra is the biggest airport in Ghana. In 2019–20, it was rated the Best Airport in Africa by the Airports Council International (ACI), a global trade representative of the world's airport authorities. The Kumasi Airport, more domestically oriented, is the second busiest airport, with an estimated 376,823 passengers in 2019.

The railway system comprises more than 900 km of tracks and is publicly managed by the Ghana Railway Development Authority. It connects major cities, resource-producing areas, the ports, and soon neighbouring countries such as Burkina Faso, as part of the ongoing 10-year rehabilitation and construction project that seeks to expand the network to 4,500 km.

Of Ghana's five major ports, the seaports and container terminals in Accra and Tema are the most important. Tema, the largest, is also home to one of the country's four SEZs, or export processing zones. The port system handles a combined transit traffic of more than 1.5 million tons, as well as a transshipment traffic of 602,778 tons. The corresponding soft infrastructure is well rated by the World Bank's Logistics Performance Index, with, for example, the customs clearance process being among the most efficient in the subregion. The regional scope of these port infrastructures (being used by landlocked countries such as Burkina Faso) contributes to making Ghana a trade and logistic hub in West Africa.

Customs duties are governed by the subregional CET, with five tariff bands: essential social goods such as medicines (0%); goods of primary necessity, raw goods and capital goods (5%); intermediate goods and inputs (10%); final consumption goods or finished goods (20%); and specific goods for economic development (35%). Additional trade-related measures aimed at protecting some industries and guaranteeing fair competition throughout the liberalized subregional markets include safeguard measures, anti-dumping measures, anti-subsidy and countervailing measures and supplementary protection measures.

Ghana's **banking and financial sector** is relatively sound, stable and open. It comprises 28 banks of national, continental and global scope, and the Bank

of Ghana serves as the country's monetary authority. The system's soundness shows in the relatively low incidence of non-performing loans (NPLs) of banks, which represents 14.5% of total loans as of March 2020, down from 18.8% in 2019. While it is expected that the pandemic can derail the observed year-to-year slowdown in NPLs, prudent risk management policies are likely to help improve asset quality risks in the medium term. Further to the banking industry's solvency, the capital adequacy ratio is 21.1%, well above the revised regulatory minimum of 11.5%, while bank profitability has increased in the last three years.

The openness of the banking and financial industry means that any domestic and foreign business and individual can hold a **foreign currency bank account**, and international transfers (corporate revenue and remittances, etc.) are made easily. The country has opted for a **flexible exchange rate** regime and, in the last five years, currency has been on a depreciating trend, from \$0.26 in April 2016 to \$0.17 in April 2021, suggesting an increased price competitiveness of the country's exports that has resulted in trade surpluses.

The active **Ghana Stock Exchange** provides facilities and framework to the general Ghanaian and non-Ghanaian public for the purchase and sales of bonds, shares and other securities. As of June 2021, 37 companies are listed. They comprise national, regional and non-African companies, which can raise capital relatively easily.

There are great **incentives for foreign investment**, especially in opportunity-filled sectors such as agriculture and agroprocessing, and textiles and garments. They include: (i) reduced corporate income tax of 0%–22%; (ii) reduced excise duty for increasing the use of local raw material; and (iii) exemption from customs import duties for plant, machinery, equipment and parts.

The Ghana Investment Promotion Centre (GIPC) is the country's single window for all investors, domestic and foreign. It is the government agency in charge of showcasing Ghana as an influential leader for doing business in Africa. In addition to providing comprehensive and up-to-date information on the type of investment incentives, their eligibility criteria, and relevant laws and regulations, the centre is a place to register a business and most administrative procedures can be done there.

In summary, the Ghanaian economy's dynamism, resilience, vibrancy and innovative drive, along with the high quality and low cost of labour and energy and the business environment's friendliness and conduciveness (among the best in Africa), constitute key reasons why Ghana should undoubtedly be counted as one of the most favourable African destinations for foreign investors.



MANGO IN GHANA: AN OVERVIEW

Mango is one of the key products of Ghana’s fruit sector, alongside pineapple, citrus and banana. The mango value chain is estimated at \$28 million, representing 7% of the total revenue generated from the horticulture industry.¹¹⁰

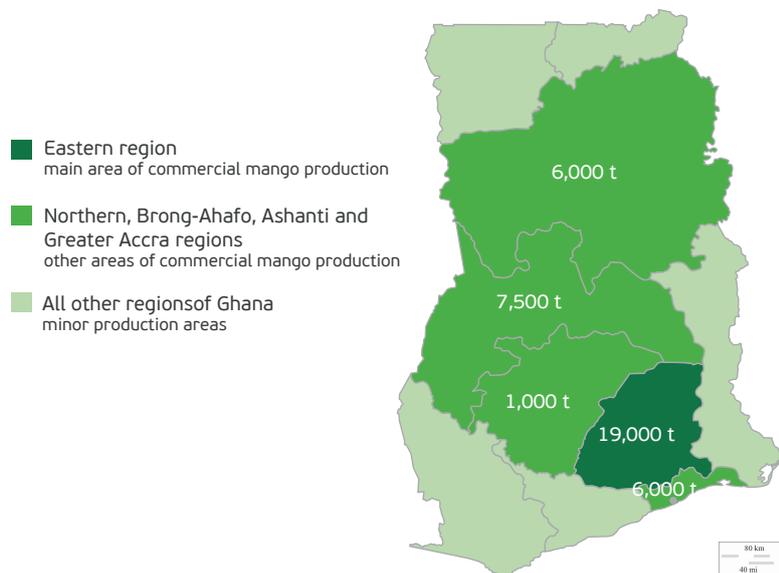
Annual mango production has been stable in the last years and is estimated to be 98,500 tons/year. Mangoes are produced in three main areas: the southern belt (Eastern, Greater Accra and Volta Regions, where the export-oriented mango cultivation first started), the middle belt (Bono East, Bono and Ashanti Regions) and the northern belt (Northern, Upper East and Upper West Regions, where commercial orchards have taken root since early 2000).

Approximately 81,000 ha are under mango cultivation in Ghana. Though large orchards are established, small-scale familial producers are still the main mango producers in Ghana. There are

approximately 2,000–3,000 mango producers, and medium-scale farms (12–40 ha) and commercial farms (more than 40 ha) dominate the production. The average yield is 12–15 tons/ha. Farmers introduced to good practices and favourable climatic conditions are able to produce 5–6 tons per acre. Competition with other crops, such as cocoa, coconut and cashew, is limited and producers tend to switch to mango production due to the revenue involved.

Mango producers in the southern belt have two harvesting seasons, and there is only one harvesting season in the middle and transition belts. The short harvest season is November to February and the main harvest season is April to August. Two dominant mango varieties are cultivated in Ghana – Keitt (approximately 80% of mango production) and Kent (10%) – and 14 other varieties are produced locally (Palmer, Tommy Atkins and Zill, etc.), but in low quantities (10%).

Figure 43: Mango production by region in Ghana



Source: Consultant, based on industry interviews

Table 16: Production and export calendar in Ghana

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
		Production season											
Regions	South												
	Middle and North												

110 Mango Cluster Diagnostic Study (2020).

The processing industry comprises small-scale processors focused on the national market (30–50 units processing less than 100 tons/year) and larger processors aiming at the international market (five units processing 200–1,600 tons/year). Processed products are fresh cut mango and dried mango for the international market, and juice for the local market. Supply of other types of products, such as mango jam, is underdeveloped.

Approximately 70% of annual mango production goes to local markets and supermarkets in regional capitals, consumed fresh or sold to local processors, which is the most important local outlet. The local supply does not meet the demand, and companies, mainly processing companies (including large ones such as Blue Skies), import mangoes from neighbouring countries (Burkina Faso, Benin and Togo) and Brazil.

Mango product export volumes are low, though increasing in the last years, at 1,700–2,200 tons/year. However, the value generated by mango exports has greatly increased, reaching more than \$35 million in 2019, as exports are focused on processed products rather than raw products. On the total annual exports, dried mango accounts for the largest share (51%), followed by fresh cuts (37%) and whole fruits (12%). The main destinations for exported mango (dried, cut and whole) are the

United Kingdom and the European Union (Germany, the Republic of Italy, and France). Switzerland and the Lebanese Republic are also important destinations.

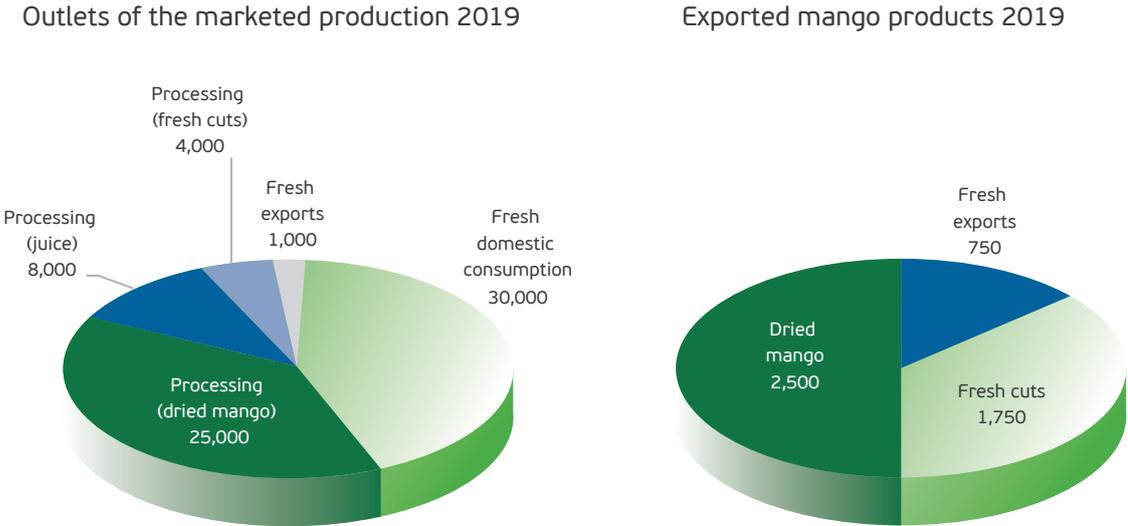
The Ghanaian mango sector’s key competitive advantages are:

- (1) Geographical proximity to the European and Middle East markets;
- (2) The two harvesting seasons in the southern belt that gives the opportunity to supply EU markets when international offer is weak;
- (3) The harvest season starts two weeks earlier than in neighbouring countries, giving an edge on the international market;
- (4) Ghana has efficient infrastructures for mango exports.

The mango sector’s biggest challenges are:

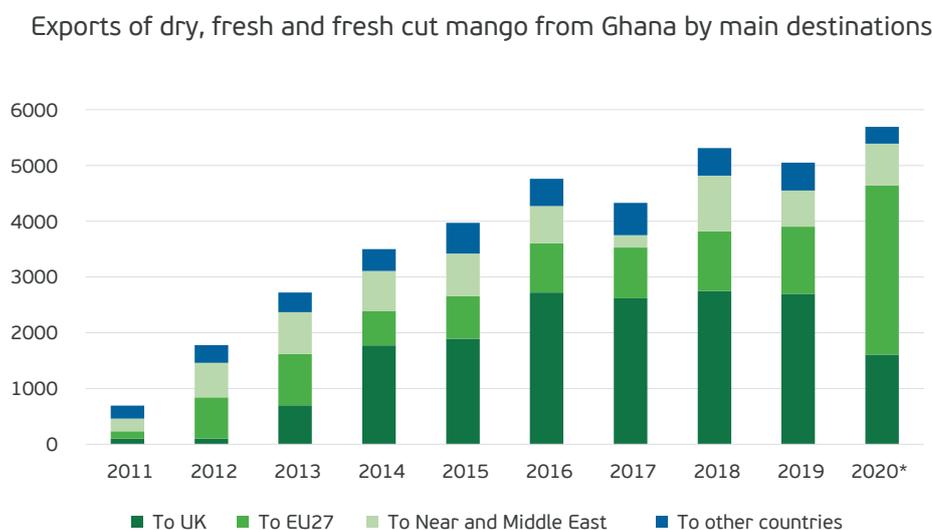
- (1) Lack of financial resources, which hinders the mango processing/export sector’s capacity to invest in production activities, renew international certification and meet export quality standard;
- (2) Pests and diseases (fruit fly and black bacterial spot disease), as it is costly to keep them under control.

Figure 44: Production outlet and quantity of exported mango from Ghana (in tons)



Source: Consultant, based on industry interviews.

Figure 45: Evolution of Ghanaian mango exports by product in 2011–20 (in tons)



Source: Consultants, based on ITC Trade Map data.

MANGO VALUE CHAIN AND STAKEHOLDERS

INPUT SUPPLY

Most (95%) seedlings come from on-farm nurseries, but there are 8–10 commercial plant nurseries in the country, some of whom provide certified seedlings to the mango industries (Vision Mango Nursery, Tiase Mango Nursery, Improve Mango Nursery and Kodaps Mango Nursery groups).

The Plant Protection and Regulatory Services Directorate (PPRSD) regulates the input sector through the Plant and Fertilizer Act (2010). Approximately 4,000 input dealers in Ghana provide various inputs, tools and services, such as pesticides and fertilizers, seedlings and land preparation equipment. Major fertilizer and agrochemical importers in the country are Dizengoff, Agrimat, Sidalco, RMG Ghana Ltd, Chemico, Yara Ghana, Afcott Ghana, Louis Dreyfus Company and Olam Ghana Limited.

PRODUCTION

There are approximately 2,000–3,000 mango producers in Ghana, of which 1,000–1,500 have medium-scale farms of 12–40 ha, and 300–1,000 are commercial farms with mango acreage of more than 40 ha. Commercial farms include Bomarts

Farms, Integrated Tamale Fruit Company (ITFC), Tacks Farms, Ghana Libyan Arab Agricultural Company (GLAACO), Prudent Farms. Small-scale producers with mango plots of 1–4 ha are the minority (approximately 500). The largest commercial farms have certifications in order to meet international standards such as Global G.A.P.

Producers' associations are well structured and can provide extension services (good agricultural practices), and manage group certifications (GlobalG.A.P.) and product marketing. They buy approximately 20% of the total annual production. Notable associations include the Yilo-Krobo Mango Farmers Association, Dangme West Mango Farmers Association, Manya Krobo Mango Farmers Association and the Volta Value Chain Cooperative Fruits and Vegetables Union Limited. These prominent groups are located within Ghana's coastal savannah ecological zone, in the Greater Accra, Eastern and Volta Regions. In the middle belt, the Mid-Ghana Commercial Mango Growers' Association, comprising GlobalG.A.P.-certified mango growers in the Ashanti, Bono, Ahafo and Bono East regions, constitute the major bloc for mango production. At the national level, the Federation of Associations of Ghanaian Exporters coordinates and provides support services to the affiliated producers' associations.

The largest producers negotiate prices through pre-harvest negotiation arrangements with the large processing companies, who buy their products from producer associations through pre-harvest contract agreement.

AGGREGATORS

Aggregators are concentrated in the production areas, especially in the southern belt, where most of the production takes place. Most (95%) aggregators are women who trade fresh mangoes to other local market women and retailers. They mostly buy Grades 2 and 3 from farmers in sacks, and channel approximately 10% of total fresh mango production. Their outlets are local markets, and local shops and supermarkets for higher grade. An estimated 40 tons of mango are consumed per regional capital per season, with consumers' preference being mostly the Keitt and Kent mango varieties.

Producers' associations also have an important role in fresh product aggregation, representing approximately 20% of total annual production. Alongside agents of processing and export companies, they serve as a link between companies and producers for commercial agreements before the harvesting season starts.

Some aggregators, export and processing companies can pre-finance, and supply inputs and extension services to producers in order to assist their production activities.

PROCESSING

Ghana's mango processing sector comprises a variety of stakeholders, with significant differences in processing capacity, equipment and market destination. Most processing companies make fruit juices, and dried mango and fresh cuts are mostly produced by medium and large-scale companies, although smaller processing units are also active in the drying fruit sector for local markets. Processing companies making other types of mango product are rare, but there are some, such as Hendy Farms, which produces mango hot sauce (up to 10 tons/week) for the local market.

Small-scale and medium-scale processors are the majority (approximately 50–70), and most are located in the southern belt. Small-scale processing units have a processing capacity of 100 tons/year and medium-scale processing units can reach 1,000 tons/year. There are 12 large-scale processing

companies (with processing capacity of more than 1,000 tons/year).

Most processing companies rely on manual labour and semi-automated machinery (fruit pressers, electric or gas ovens, and electric pasteurisers), often locally manufactured. They can employ 10–50 people, with women accounting for 55% of the workforce. Approximately 3,000 people are employed by these processing units in Ghana.

According to the data available, large fruit juice producers can reach 500 cartons of 12 bottles (350 ml) per day (e.g. Vintage Farms).

Small-scale units can produce approximately 10–100 cartons of juice (12 x 350 ml bottle) per day, while medium-scale units can produce up to 500 cartons per day (Vintage Farms). Large-scale processors (Blue Skies, HPW AG, and Peelco) are the main producers of fresh cuts and dried mango.

Most processing companies focus on the domestic market and a few (Wad African Foods Limited, HPW AG, and ITFC) are strictly oriented towards the international market. Many processing companies cannot afford the quality certifications needed for the export market and only about 10% of them meet international market quality requirements. Moreover, labelling and packaging quality is a challenge that must be addressed in order to reach the international market. However, a few local companies (e.g. Vintage Farms) succeeded in targeting the West African markets (10,000 cartons of fruit juice sent per month to Burkina Faso and Nigeria). Large-scale processors export approximately 90% of their production to EU countries like Germany, Switzerland, the Netherlands, Italy and France.

Most processing units work at 10%–15% of their capacity. Inconsistent supply of raw material is one of the problems, as they cannot compete with large companies that contract a large number of producers. In order to solve the supply issue, some processors (Wad African Foods Limited, Vintage Farms, Hendy Farms, Joanova Farms, and ITFC) have established their own farms in order to ensure constant supply. Farms range from 20 ha (e.g. Wad African Foods Limited) to 810 ha (e.g. ITFC, in addition to the outgrower scheme they support). Some processors have also initiated outgrower contracts with local farmers to supply their processing facility (1,300 outgrowers of organic mango with ITFC). Small and medium-scale processors also face high production costs and a lack of investment, reducing their productivity.

EXPORTERS

Exporting companies can work on fresh mango and mango product exports. Most mango exporters are not in the production business due to the lack of capital needed to manage the orchards and supply direct from commercial farms or producers' associations.

Ghana has four exporters with pack houses: Bomarts Farms and Akorley pack house in the eastern region, ITFC in the Savannah Region and Vakpo pack house in the Volta Region. The Akorley pack house was funded by the Millennium Development Authority (MiDA), owned and used by four mango organizations (Lower Manya Krobo Mango Farmers Association, the Upper Manya Krobo Mango Farmers Association, the Yilo-Krobo Mango Farmers Association and the Dangme West Mango Farmers Association). Farmers from the Volta Region can also use the facility. Cotton Web Link Portfolio Ltd runs the Akorley pack house and ensures that it meets HACCP requirements. The pack house offers an automated processing service and cold room storage.

STORAGE FACILITIES

Warehousing available for the mango industry in Ghana is limited. There are only two operational pack houses in the southern zone, with cold rooms for approximately 20 tons, and a cold storage facility for fruit in Tema.

INFRASTRUCTURE

The road infrastructure in the southern belt is good and projects in the past decades upgraded 407 km of feeder roads in horticulture production areas. The road infrastructures in the middle and northern belts are more degraded. The main roads used by mango products are Somanya–Accra, Dodowa–Accra, Dzodze–Accra, Kintampo–Accra, Sunyani–Accra, Techiman–Accra and Tamale–Accra.

The Tema port is one of the most efficient ports in West Africa and has a cold storage facility. The Kotoka international Airport is equipped with three public pack houses and pre-coolers for perishable goods.

PUBLIC AGENCIES

The Ghanaian Government recently established the Tree Crops Development Authority (TCDA), which covers cashew, shea, mango, coconut, rubber and oil palm. This body is in charge of the regulation and development of production, processing, trading and marketing of the six tree crops in Ghana. Through the Tree Crop Development Fund, TCDA's tasks include the identification and development of sustainable sources of funding for the tree crop industry, the promotion and support of the industry's development, the collection of statistical data and advising the government and the private sector.



INVESTING IN MANGO IN GHANA: KEY FIGURES



Input supply

Number of mango plant nurseries in the country: 89 (50 in Greater Accra, 30 in eastern, 5 in Volta and 4 in Brong Ahafo)

Number of suppliers of fertilizer/ phytosanitary treatments in the country: 57

Number of suppliers of organic fertilizers/ phytosanitary treatment in the country: 17

Number of national manufacturers of mango packaging (cartoons and kraft paper cardboards, etc.): 1



Production

Estimated total production: 100,000 tons

Estimated commercial production: 68,000 tons

Number of commercial mango farms (with > 1 ha mango orchard): +/- 450

Average yield of commercial mango farms: 4 tons/ha (small farms) to 7 tons/ha (big farms)

Farm gate prices (export varieties):
Min.: 1 GHS/kg; median: 1.5 GHS/kg; Max.: 1.8 GHS/kg



Marketing

Distance from main production area to airport: 100 km from Somanya to Tema; 400 km from Nkoranza to Tema

Distance from main production area to port: 150 km (closest) to 400 km (farthest)

Number of available platforms/centres for cleaning/packaging/export: 4 (Bomarts Farms and Akorley in eastern; ITFC in Savannah; Vakpo pack house in Volta)

Number of exporting companies: 6

Volume of fresh export in 2020: 1,000 tons

Rejection rate in the EU in 2020: 5%



Processing

Share of local processing (commercial production): 55%

Main process: Dried mango for diversified export market

Number of industrial processing companies: 15 (main 5 are Blue Skies, Peelco, Pinora Ghana, HPW AG and ITFC)



Investment indicators

Cost of land in rural area (leasing more than 30 years): 30,000 GHS (\$5,172) per hectare

Cost of land in urban area (industrial zone): 300 GHS to 1,800 GHS/m² (\$500,000–\$3,000,000/ha)

Cost of power: 0.8 GHS/kWh (\$0.14//kWh)

Cost of unskilled labour: 400 GHS/month (\$85/month)

Cost of skilled labour: 3,000 GHS/month (\$500/month)

Cost of transportation: from eastern to Tema: 4,000 GHS (\$675) per 20' reefer; from Brong Ahafo to Tema: 10,000 GHS (\$1,700) per 20' reefer

Enabling Business in Agriculture (EBA 2019) score and rank: 50.49 (rank 72/101)

Doing Business (2020) score and rank: 60 (rank 118/190)



INVESTMENT OPPORTUNITIES IN GHANA'S MANGO SECTOR

OPPORTUNITY 1: INNOVATIVE MANGO PRODUCTION IN ASSOCIATION WITH OTHER FRUIT CROPS

Innovative production, with intercropping systems including several fruits to enable continuous production throughout the year and supply to the processing sector with several types of fruits. The particular climate of central Ghana is extremely suitable for such innovative food production systems and the strong growth of the fruit processing sector in the country can be taken as an advantage to secure an outlet and fix relatively stable prices through contract farming or risk sharing agreements.

OPPORTUNITY 2: MANGO AND FRUIT PROCESSING

It is possible to take advantage of the fruit processing sector's fast growth in Ghana by investing in processing of puree, juices, slices or dry mango, complemented by the same activities with other fruits (among others, pineapple, coconut, guava, papaya, passion fruit and avocado). Ghana provides an attractive agribusiness ecosystem as well as a highly performing port in Tema thanks to recent investments to broaden the port. Political stability, several free trade zones and very diversified fruit production create an ideal environment for mango and fruit processing, particularly for export to the rest of the world.

OPPORTUNITY 3: MANGO CULTIVATION WITH DRIP IRRIGATION

In Ghana, the strong demand for mango from the processing sector and low supply during the off-season (particularly February to March and September to October) makes investing in mango production very strategic. Thanks to drip irrigation and floral induction, it is possible to produce mango in the counter-season in Ghana's central and southern dry belt. This production can target national processors, but also fresh export and national fresh markets. Investing in intensive, piloted and precision farming to target the off-season periods is a strong opportunity investment that could be linked to other fruits cultivation presented under the above opportunity.



INVESTMENT AND MANGO SECTOR SUPPORT STRUCTURE AND PROGRAMMES

Table 17: Investment and mango sector support structure and programmes				
Implementing agency	Funding agency	Geographical coverage	Scope of intervention	Project duration
Project name: HortiFresh				
Netherlands Development Organization (SNV)	Netherlands Government	Greater Accra, Central, Volta, Bono	<p>HortiFresh supports the sector through activities and funds that contribute to: increasing the value of exports, both to the EU and to regional markets; and improving quality and value-added in the domestic market, also aiming to reduce imports. HortiFresh aims to achieve this through business partnerships and cluster development activities focusing on innovation and scaling. Importantly, it will stimulate the banking sector to develop tailored financial products for the horticulture sector.</p> <p>Major activities include: new financial products for the horticulture sector; individual company support; commercial agronomic support services; horticulture cluster development funds; innovation funds; technical support in business management; trade promotion</p>	Ongoing
Project name: GIZ – Market Oriented Agriculture Programme (MOAP)				
GIZ	German Government and the European Union	Nation-wide	<p>The MOAP specializes in promotion of the value chains for mango, pineapple, citrus fruits and vegetables, as well as rice, sorghum, soya beans, peanut and cashew. They have been funded in Bono, Bono East, Ahafo, Eastern, Central and Volta, as well as in the Upper West and Northern Region since 2017, through EU co-financing.</p> <p>Major activities include: Provision of inputs and services; good agricultural practices (GAP); processing; marketing and certification</p>	2004–19
Project name: Ghana Agricultural Sector Investment Programme (GASIP)				
Ministry of Food and Agriculture (MoFA)	International Fund for Agricultural Development (IFAD)	Nation-wide	<p>The GASIP aims to provide a framework and institutional basis for long-term engagement and supplementary financing for scaling up investments in private sector-led pro-poor agricultural value chain development.</p> <p>Major activities include: linking smallholder farmers to agribusinesses to enhance pro-poor growth; nationwide scaling up of a successful value chain investment approach; promoting and mainstreaming climate change resilience approaches in Ghana, in particular in the northern regions, financed through the Adaptation for Smallholder Agriculture Programme (ASAP); knowledge management, harmonization of intervention approaches and policy optimization</p>	
Project name: Modernizing Agriculture in Ghana (MAG) programme				
Ministry of Food and Agriculture (MoFA)	Global Affairs Canada	Nation-wide	<p>The MAG programme is the major government initiative driving the Planting for Food and Jobs programme. The programme intends to improve access to improved seedlings, fertilizers, extension services, marketing for produce and e-agriculture</p>	

Project name: Ghana Commercial Agriculture Project (GCAP)

Ministry of Food and Agriculture (MoFA)	World Bank	National	<p>The GCAP's objective is to improve agricultural productivity and production of smallholder and nucleus farms in selected project intervention areas with increased access to reliable water, land, finance, agricultural inputs and output markets.</p> <p>The project achieves these by:</p> <ul style="list-style-type: none"> strengthening investment promotion infrastructure; facilitating secure access to land; securing public-private partnerships and small-holder linkages in the Accra Plains; Securing PPPs and small-holder linkages in the ADA Zone Investments in physical rehabilitation and modernization of existing irrigation and drainage infrastructure; support to the restructuring of Ghana's irrigation and drainage institutions; support for the development of new institutions, including water users' associations.
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Project name: Skills Development Fund (SDF)

SDF Secretariat	Danida	Nation-wide	<p>The SDF is a challenge fund providing a demand-driven response to three critical challenges encountered by Ghana's productive sectors: (i) an adequately qualified labour force; (ii) the urgency to provide new entrants to the labour market with gainful, employable skills; and (iii) inadequate access to new technologies and innovations.</p>
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SWOT OF GHANA'S MANGO SECTOR

Figure 46: SWOT of Ghana's mango sector

	Mango production, harvesting and processing	Other
Strengths	<ul style="list-style-type: none"> ▪ Strong producers' associations and associations' organization (Federation of Associations of Ghanaian Exporters, and Papaya and Mango Producers and Exporters Association of Ghana) and the Tree Crops Development Authority (TCDA) that coordinate mango activities both at the national and regional levels ▪ Producers have good appreciation of the relevance of good agricultural practices and international certifications such as GLOBALG.A.P. and Fairtrade ▪ Past and ongoing involvement of development partners such as the United States Agency for International Development (USAID)/Trade and Investment Promotion for Competitive Export Economy (TIPCEE) project, GIZ–Market Oriented Agriculture Programme (MOAP), Adventist Development and Relief Agency (ADRA), the Ghana Commercial Agriculture Project (GCAP), and more recently WACOMP in the southern zone, among other technical and financial partners; these have significantly improved the quality of mango production, harvesting and processing ▪ The southern zone benefits from two harvesting seasons (April to August and December to March), which enables it to supply mangoes all year round 	
Weaknesses	<ul style="list-style-type: none"> ▪ Poor access to finance for production due to the perceived risks and seasonality of agriculture and agriculture-related businesses ▪ Low productivity ▪ Poor post-harvest practices in the area of fruit handling and transportation, among others, lowers the quality of fruits produced and contributes to post-harvest losses ▪ Small production quantities make it difficult to compete with large players such as Costa Rica, Brazil and Peru ▪ Lack of irrigation facilities to farms, especially in the northern zone, who experience more than six months of drought ▪ Difficulty of operators to maintain international certifications due to the associated costs ▪ High dependency on external support 	
Opportunities	<ul style="list-style-type: none"> ▪ Mango and fruit processors in Ghana are always on the lookout for mangoes for processing purposes, which is good for producers ▪ High demand for fresh mango (imports from other countries) and processed fruit products has increased in the domestic market, especially in Accra ▪ Presence of community pack house 	<ul style="list-style-type: none"> ▪ The sector has well-established international beverage processing firms, which provides opportunities for other actors along the chain ▪ EU mango imports are still growing; however, supplies are dominated by South America
Threats	<ul style="list-style-type: none"> ▪ The high prevalence of the bacterial black spot (BBS) disease reduces the number of fruits available for processing and exports; farmers lose approximately 15%–30% of products due the effects of the BBS disease ▪ Post-harvest loss due to inadequate storage facilities and cost of utility to store fruits after main harvest 	

ANNEX

ANNEX 1 – LIST AND CONTACT DETAILS OF MAJOR STAKEHOLDERS IN THE MANGO SECTOR

Company Name	Address (Street, City)	Telephone	Email	Website	Contact (Name, Surname)
BURKINA FASO					
COOPAKE (Coopérative Agricole De Kéné Dougou)	Orodara	+226 75515574	coopake63@gmail.com kon2soul@yahoo.fr		Konate Souleymane, coordinator
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Faso Mangoro	Bobo Dioulasso	+226 70779399	fasmangoro@yahoo.fr		Ouattara Abou, Director
Houet Select	Lot 8 Parcelle 12 Bobo Dioulasso	+226 76615507	houetselect1@hotmail.fr		D'arondel De Hayes Philippe, Director
Sanle Sechage Export	7.33 Banfora	+226 20911631	sanleexportburkina@yahoo.fr		Kone Yaya, Director
Sn-Ranch Du Koba Bf	01 Bp 3828 Bobo-Dsso 01 20.169 Bobo-Dioulasso	+226 70 10 22 15	ranchkoba@yahoo.fr	www.ranchkoba.com	Bougoum Issaka, Managing Director
CÔTE D'IVOIRE					
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Pure	Abidjan	+225 08 08 64 65	lynne.ghossein@gmail.com		Ghossein Lynne, Managing Director
Ranch De Koba	Abidjan	+225 07 01 47 72 / 07 01 47 74 / +225 07 05 97 64	vazoumana@hotmail.com		Jouve Franck / Bamba Vazoumana, Managing Director
VDB (Vergers Du Bandama)	Abidjan	+225 08 71 13 19	vdn2010@hotmail.fr		Charles Vallier, Director
Vidalkaha	Abidjan	+225 07 93 33 13			Alexandra VIDAL, Director

GHANA					
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MALI					
Scs International	Immeuble Babemba, Avenue Kasse Keita, Bolibana, Bamako	+223 20 22 65 60	m.amegankpoe@scsinternationalmali.com	www.scsinternationalmali.com	Amegankpoe Marlene, Managing Director
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