

REPUBLIC OF COTE D'IVOIRE

AGRICULTURAL SECTOR UPDATE

June 25, 2019

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ACRONYMS

AFD	<i>Agence Française de Développement</i> (French Development Agency)
AFDB	African Development Bank
AFOR	Agence Foncière Rurale
AGEROUTE	Agence de Gestion des Routes (Road Agency)
AIPH	Association Interprofessionnelle du Palmier à Huile (Oil Palm Interprofessional Association)
ANADER	Agence Nationale de l'Appui au Développement Rural (National Agency Rural Development Support)
APROMAC	Association des Professionnels du Caouthchouc Naturel de Côte d'Ivoire (Rubber Inter-Professional Association)
ASP	Agricultural Sector Project
BCEAO	Banque Centrale des Etats de l'Afrique de l'Ouest (Central Bank of West African States)
CCA	Conseil du Coton et de l'Anacarde (Cashew and Cotton Council)
CCC	Coffee and Cocoa Council
CFAF	Franc de la Communauté financière d'Afrique (Financial Community of Africa Franc)
CNRA	Centre National de Recherche Agricole (National Agricultural Research Center)
DOPA	Department of Agricultural Professional Association/ MINADER
DUS	Droit Unique de Sortie/Export Tax
ECOWAP	Economic Community Of West Africa States
EDB	Ease of Doing Business
EU	European Union
FAO	Food and Agriculture Organization
FENACOOPAHCI	Fédération Nationale des Coopératives de Palmier à Huile de Côte d'Ivoire (National Federation Organization of Oil Palm Cooperatives)
FIRCA	Fonds Interprofessionnel pour la Recherche et le Conseil Agricoles (Interprofessional Council Fund for Agricultural Research and Extension)
FIMR	Fonds d'Investissement en Milieu Rural (Rural Investment Funds)
FY	Fiscal Year
GAP	Good Agricultural Practice
GDP	Gross Domestic Product
GoCI	Government of Côte d'Ivoire
HDI	Human Development Index
ICCO	Internal Coffee and Cocoa Organization
ICI	International Cocoa Initiative

ICT	Information and Communication Technologies
IDA	International Development Association
IFC	International Finance Corporation
IMF	International Monetary Fund
ILO	International labor Organization
INADES	Institut Africain pour le Développement Economique et social (African Institute for Economic and Social Development (Institut Africain pour le Développement Economique et social))
INTERCOTON	Cotton Inter-Professional Organization
IMP	Integrated Pest management
JFA	Joint Framework for Action
M&E	Monitoring and Evaluation
MDG	Millennium Development Goal
ME	Ministry of Environment
MEF	Ministry of Economy and Finance
MFW	Ministry of Forests and Water
MIE	Ministère des Infrastructures Economiques (Ministry of Economic Infrastructure)
MINADER	Ministère de l'Agriculture et du Développement Rural (Ministry of Agriculture and Rural Development)
MIS	Management Information System
NAIP	National Agriculture Investment Plan
NDP	National Development Plan
PER	Public Expenditure Review
PPP	Public Private Partnership
PPPP	Public Private Partnership Platform
PRSP	Poverty Reduction Strategy Paper
R&D	Research and Development
RCI	Republic of Côte d'Ivoire
REDD	Reducing Emissions from Deforestation and Forests Degradation
RSPO	Round Table for Sustainable Palm Oil
SODEFOR	Société de développement des Forets
TFP	Total Factor Productivity
VAT	Value Added Tax
WCF	World Cocoa Foundation
WAEMU	West African Economic and Monetary Union
WAAPP	West Africa Agricultural Productivity Program

Executive Summary

1. **Since its return to political stability in 2012 after more than a decade of civil conflict, Côte d'Ivoire has experienced a strong economic revival.** With an average 8 percent real annual GDP growth from 2012 to 2018, the country continues to be one of the fastest growing economies in Sub-Saharan. Macroeconomic management has generally been sound. Trade balance deteriorated due to lower export prices and higher import prices, but trade surplus remains significant. Tax revenue remained constant at 15.5 percent of GDP and the fiscal deficit remains around 4%, in line with IMF targets. The country has implemented numerous reforms that significantly contributed to an overall improvement in the business environment

2. **Côte d'Ivoire has built its economic development on agriculture.** The agriculture sector accounts for about 23 percent of Cote d'Ivoire's total GDP and over two-thirds of all exports. Agro-industries represents about 7% of total GDP and 50% of the manufacturing sector. It is the world's largest producer of cocoa accounting for 40% of total world production. It has become the largest producer of raw cashew nuts in the world and remains the largest exporter of rubber, palm oil, bananas, pineapples and copra, and the second producer of Robusta coffee in Africa. The country is also self-sufficient in a variety of staple foods, namely maize, sorghum, millet, yam, cassava, plantain banana, with growing exports to the sub-region. Rice remains the exception with total imports representing 50% of the country's domestic demand. The sector is a pillar of the economy despite a modest and volatile performance in the last decade. Overall, agricultural growth has fluctuated from 16% in 2014 to a low of -1% in 2016 before rebounding to 6.8% in 2017, buoyed by favorable weather conditions which allowed a sharp increase in cocoa production and exports.

3. **Nevertheless, the agricultural sector has not contributed to its full potential towards growth and poverty reduction.** Agricultural growth has been essentially based on the rapid colonization of the country's rich natural resources with little investments in return in research/technology development/dissemination. From 2011, no changes have been observed with a rather "business as in the past" policy marked by little public investments in agriculture.

4. **The country now stands at a cross-road for the structural transformation of its agriculture sector.** A new development orientation should be defined to unleash the potential of the sector for inclusive growth and poverty reduction. Achieving this potential will require decisive actions addressing the key constraints that negatively hinder the performance of the sector considering the long-term strategic trend that will shape future agricultural development.

5. **The first main pathway entails moving from a factor-based growth to an efficiency-driven agricultural development with higher agricultural productivity.** Maintaining a sustained growth in agriculture will require considerable investments in efficient technology generation and innovation and a much better access to inputs and advisory services. Considering the increasing national and regional demands for food crops and expected shift to higher value and

processed products, the country needs to build up a strategic research and extension services development with a focus on fruits and vegetables, which offer a potential for inclusive growth. In addition,

Second, an adequate transport infrastructure for better access to markets will be a major driver of agricultural development. The rehabilitation of the national rural road network should be a priority. Scaling up innovative approaches to decentralize to local government levels the decision making in rural roads construction and rehabilitation planning should be pursued. A greater implication of the private sectors in the planning and financing of the maintenance of rural roads network will be more effective in connecting productions zones to main market centers. The Policies measures to improve overall efficiency of transport services and reduce costs should be implemented.

Building on existing market opportunities will be essential. The development of ICT and e-agriculture systems should be supported to deliver market information and advice on good agricultural practices in key agricultural supply chains. As food safety is international markets, the Government should seek the effective implementation of its existing national food system. The legal and regulatory framework must be updated to reflect fast changing national and international environment/requirements in terms of food safety issues and standards. In the long term, adapting to demographic and economic trends will require means to capture potential benefits from emerging secondary cities. This would entail supporting the establishment of regional dynamic centers and scale economies needed to unleash the agricultural potential of different agro-ecological regions of the country.

Promoting the structural transformation of the agricultural sector will also require the emergence of strong interprofessions. The Government must work towards the effective transfer of operational responsibilities of the value chain to actual interprofessions. Efforts must be revived for the establishment of legitimate producers' organizations, missing link for the establishment of a true interprofession for the efficient key of value chains.

Another pathway to attaining inclusive growth is to build human capital. Rehabilitating the national Agricultural Education and Training (AET) system would help leverage gains from agricultural productivity and innovation. The Government must invest in upgrading the quality of technical agricultural and develop private sector-oriented programs covering essential business and behavioral skills as well as practical knowledge.

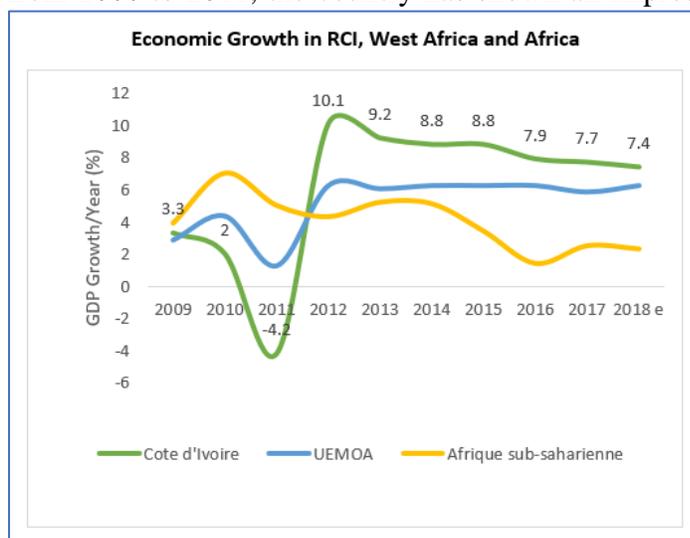
Finally, the country must establish an environment conducive to private-sector led growth. Côte d'Ivoire must continue to adopt and implement medium and long-term reforms that will contribute to improve the agricultural business environment able to attract the private sector. This includes transport logistics, access to land, access to finance, the cost and quality of labor and governance issues.

1. SETTING THE STAGE

1. **The Agriculture Sector Update aims to provide a sector knowledge baseline to be used in designing future activities and policies in the sector.** It briefly summarizes the sector's recent performance, challenges, and untapped potential to foster inclusive growth and contribute more effectively to poverty reduction. The note discusses key transversal issues and challenges related to production, marketing and processing segments of the agriculture sector. It then identifies priority areas where focus should be made in modernizing and improving the performance of the agri-food sector for further economic growth.

1.1. Context

2. **Côte d'Ivoire's economy has experienced a strong economic revival over the last decade.** With the return of political stability and peace after a period of civil conflict that lasted from 2000 to 2011, the country has shown an impressive economic performance. From 2012 to



2017, average real annual GDP growth was about 8 percent, in sharp contrast with the performance -- 1 percent/year -- registered during the 2002–11 period (Box below). With population increasing at about 2.5% per annum, while the real GDP per-capita growth decreased by 23% between 1998 and 2011, it increased by 34% between 2012 and 2017. With GDP growth estimated at 7.4% in 2018, Côte d'Ivoire continues to be one of the fastest growing economies in Sub-Saharan Africa. Four main factors have

been identified as drivers to sustained high economic growth: (i) macroeconomic stability (exchange rate, inflation, debt management); (ii) good business environment promoting private investments; (iii) export orientation; and (iv) income growth and equality. On all these factors, Côte d'Ivoire's performance has been improving but needs to make sustained progress.

3. **Macroeconomic management has generally been good despite some medium-term risks.** Côte d'Ivoire's monetary and exchange rate policies are managed at the regional level by the Central Bank of West African States (BCEAO), which maintains a fixed peg between the CFA Franc and the Euro. Average annual inflation remains low at 0.5 percent at the end of first semester of 2018, well below the WAEMU regional target of 3 percent. Trade balance deteriorated due to lower export prices and higher import prices, but trade surplus remains significant. Tax revenue remained constant at 15.5 percent of GDP and the fiscal deficit remains around 4%, in line with IMF targets. Public debt increased from 47.1 percent of GDP in 2016 to 50.7 percent of GDP in 2017 but the risk of external debt distress remained moderate. The main medium-term risk

concerns the fiscal deficit, with public spending being markedly pro-cyclical, with cocoa revenues, and a rapidly raising foreign debt.

4. **Over the last seven years, Côte d'Ivoire has implemented reforms that significantly contributed to an overall improvement in the business environment.** The Cote d'Ivoire has recently been one of the ten fastest reforming countries in the world. It has improved its ranking in World Bank's Ease of Doing Business Index (DBI) from the 169th position in the 2011 (out of 183 countries) to 139th position (190 countries) in 2018. and from 138th/144 countries in 2011-12 to 99th/138 in 2016-17 in the World Development Forum's Competitiveness Index. Both surveys however underline that Côte d'Ivoire's performance is only just slightly above median scores in most key indicators and still presents very problematic factors for the private sector (most importantly obtaining credit, protecting investors and trading across borders), and emphasize the need for continued determined action for improving its business climate.

5. **Cote d'Ivoire has a strong export orientation with a weak complexity and propensity to export manufactured goods.** Cote d'Ivoire is the eighty third largest export economy in the world. In 2016, Cote d'Ivoire exports represented 30.8 percent of GDP (US\$11 billion) while imports were 22.1 percent of GDP (US\$8 billion). As a result, the trade balance was positive at 8.7 percent of GDP (US\$ 3billion). However, exports are low in complexity, reflecting the relatively low complexity of the economy (119th of 214 countries at -1.52)¹. Its exports are dominated by unprocessed or little processed commodities (80%): Cocoa beans represent 36% of Cote d'Ivoire' exports, followed by cocoa paste (10%), petroleum products (10%) and rubber 6%). As comparators, Indonesia ranks 72nd, Mauritius 64th, Morocco 88th, and Philippines 49th.

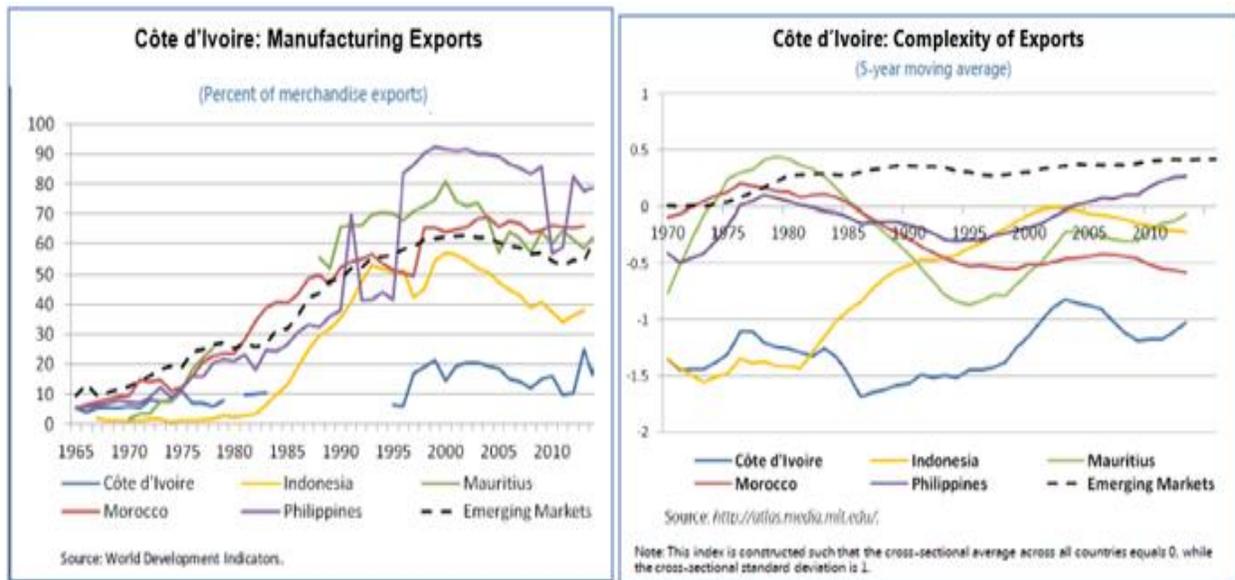
¹ The Economic Complexity Index (ECI) and the Product Complexity Index (PCI) are, respectively, measures of the relative knowledge intensity of an economy or a product. ECI measures the knowledge intensity of an economy by considering the knowledge intensity of the products it exports. PCI measures the knowledge intensity of a product by considering the knowledge intensity of its exporters. Japan has an economic intensity of 2.2, Guinea of -2.0 and Colombia and South Africa of 0.0.

Share of total export (value, 2016)

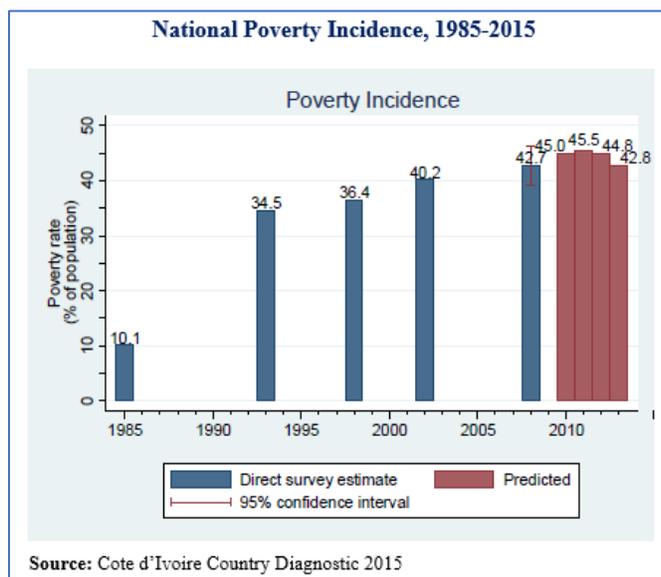


Source: Observatory for Economic Complexity (OEC)

6. **The country needs to gradually increase the complexity of its exports to sustain the growth rate of its economy.** Indonesia is of particular interest, as it was very similar to Côte d'Ivoire in terms of export-complexity in the 1970s. Since then, however, its export complexity has increased significantly while Cote d'Ivoire has stagnated, as indicated by the slow rise in its manufacturing exports. Countries with higher propensities to export manufactured goods are able to sustain high growth rates for longer periods of time. It would be critical that Cote d'Ivoire increase both the complexity of its economy and of its exports, toward manufactured goods, to reach and sustain high growth rates.



7. **Cote d’Ivoire also shows a high level of poverty and income inequality.** After falling significantly in the “boom” period after independence, Côte d’Ivoire experienced a dramatic rise in poverty from 1985 to 2012: poverty increased four folds between 1985 and 2002, from 10% to 40%. It then increased further to 46% during the years of political turmoil and economic stagnation of the 2000 decade, before falling to around 42% in 2015 as economic growth rebounded. It is



estimated that it has fallen slightly below 40% currently. Poverty is particularly high in the northern and northeastern region of the country, reflecting the low productivity of these regions' farming systems. There is also significant inequality in the distribution of economic welfare in Côte d’Ivoire as indicated by the Gini measure of inequality which has hovered around 38 percent until the beginning of the 2000s, then increased to about 43 percent in 2008 (during the recent crisis) before decreasing slightly to 41% according to the 2015 “*Enquete sur le niveau de vie des menages en Côte d’Ivoire*”.

8. **There is a gender inequality in terms of access to economic opportunities.** Cote d’Ivoire’s *Gender Development Index* (GDI) is low. Its 2017 Gender Development Index (GDI)² was 0.446 and its Gender Inequality Index (GII) value was 0.663, ranking Cote d’Ivoire 155 out of 160 countries. In 2017, girls represented 46.7 percent of primary school students. Only 14 percent of girls reach secondary school (30 percent of boys), and 6 percent of girls are enrolled in higher education. The adult literacy rate was 25 percent among women against 54 percent of men. In rural areas, only 5 percent of women have access to land ownership -- while they are responsible for 75 percent of basic food production. These figures highlight the fact that women don't have equal access to economic opportunities and point to the vast untapped potential for economic growth that could be mobilized through a better inclusion of women. Persisting gender inequality is made possible by the low enforcement of existing laws, insufficient integration of gender issues into policies and development programs and the generally low sensitivity of the population to gender discrimination and inequality. These issues should be tackled in earnest and a gender observatory should be put in place to measure progress toward gender equality in Cote d’Ivoire,

² The GDI measures gender inequalities in achievement in three basic dimensions of human development: health (measured by female and male life expectancy at birth), education (measured by female and male expected years of schooling for children and mean years for adults aged 25 years and older); and command over economic resources (measured by female and male estimated GNI per capita).

9. **Poverty is much higher in rural areas than in urban areas.** The rural population suffered the most over the last three decades, with rural poverty increasing from around 12 percent in 1985 to 57 percent in 2015, while urban poverty increased from a low of 6 percent to 36 percent (at the national poverty rate) during the same period. Today, 4 out of 5 poor live in rural areas, with farmers by far the poorest with poverty rates at about 60 percent³ compared to 25 percent among craft traders and people in services and sales and 10 percent among professionals. In view of the large number of rural poor sustaining themselves through agriculture, agricultural development has major and direct implications for poverty reduction. Among farmers, poverty doesn't appear to be due to landlessness⁴ (it is estimated that less than 5% of agricultural /rural households are landless). Also, the structure of rural household portfolio is rather diversified and has remained relatively stable for 20 years. In the most recent survey (2008), most agricultural households produce at least three crops and the contribution of agricultural income (crop and livestock) to agricultural households' total income is around two-thirds, with another third coming from wages and non-farm enterprises⁵. Thus, rural/agricultural poverty appears largely due to the low productivity of farming systems⁶ and of most non-agricultural rural activities. Increasing productivity, of both agricultural and non-agricultural rural activities, will thus be a major part of the fight against rural poverty.

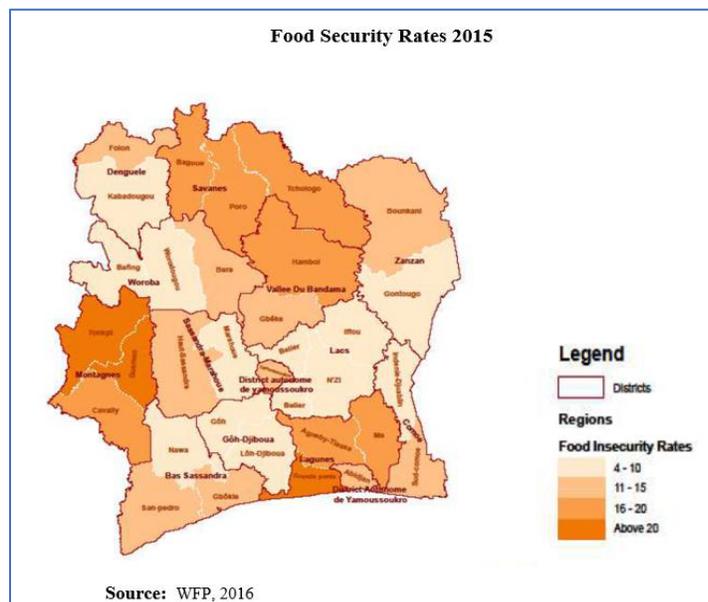
³ A recent study by the French Development Agency (AFD) and Barry-Callebaut, the world's leading manufacturer of high-quality chocolate and cocoa products, estimates that Ivorian cocoa farmers earn about FCFA 568 per day, approximately US\$1.00/day.

⁴ World Bank: Shocks, Inequality and Poverty: A Poverty Assessment, My 2011

⁵ Poorer rural households rely heavily on crop production. For the bottom 40 percent, crop production constitutes nearly 70 percent of income. For the top 20 percent, however, crop production accounts for only 47 percent of income, with wage and non-farm income accounting for 37 percent.

⁶ Rural poverty is also linked to geographical location, which determines agro-climatic conditions, the type of possible agricultural activities: geographically, poverty is concentrated in the north (60 percent) and the northeast (54 percent).

10. **Food insecurity was estimated to affect close to 13 percent of the population, and severe food insecurity 4% in 2015.** Despite a globally satisfactory availability of food in Cote d'Ivoire, both from local production and imports, food insecurity and malnutrition rates remain high. Food insecurity is greatest in northern and western rural areas, particularly in rural areas



(15% of households and 5% in severe food insecurity) and among households headed by women. In 2012, 29.8 percent of children under 5 in Cote d'Ivoire were stunted, just below the 30 percent warning threshold for stunting. Stunting was particularly high in the north and north-east (39 percent) and in the west (34 percent). In the same year, 8 percent of children under 5 suffered from Global Acute Malnutrition (GAM) with this level increasing beyond the 10 percent warning threshold for GAM in the north-eastern region of Zanzan with 11 percent GAM. The high prevalence of chronic

malnutrition in the northern regions is strongly correlated not only with the high level of poverty but also to with a lack of diversity in a diet based on tubers and cereals representing above 65 percent of daily calorie intake. High infectious disease prevalence (malaria, acute respiratory infection, HIV), poor access to basic health services, lack of clean drinking water, and inadequate hygiene and sanitation also play a significant role in Cote d'Ivoire's nutrition situation.

11. **Recurrent climate shocks exacerbate vulnerability.** The sustainability of food systems is increasingly threatened by climate change, in particular in the Northern part of the country where smallholders are particularly vulnerable to recurring climatic shocks. Women smallholder farmers are among the most vulnerable population. They are less likely to have access to land, inputs (seeds, fertilizers, water and credit) and technical training. Although the 1998 rural land law ensures equal access to land by Ivorian women and men, in practice, women are rarely land owners due to sociocultural constraints.

12. **Rural livelihoods are strongly impacted by the poor quality of rural infrastructure.** Indeed, the infrastructure gap between the more affluent urban areas and the poor rural areas is compelling: rural transport infrastructure is badly degraded ; 88% of the urban population has access to electricity compared to 29% of the rural population; 16% of households in urban areas has access to the internet compared to only 2% in rural areas; and 33% of the urban population has access to improved sanitation facilities compared to 10% of the rural population.

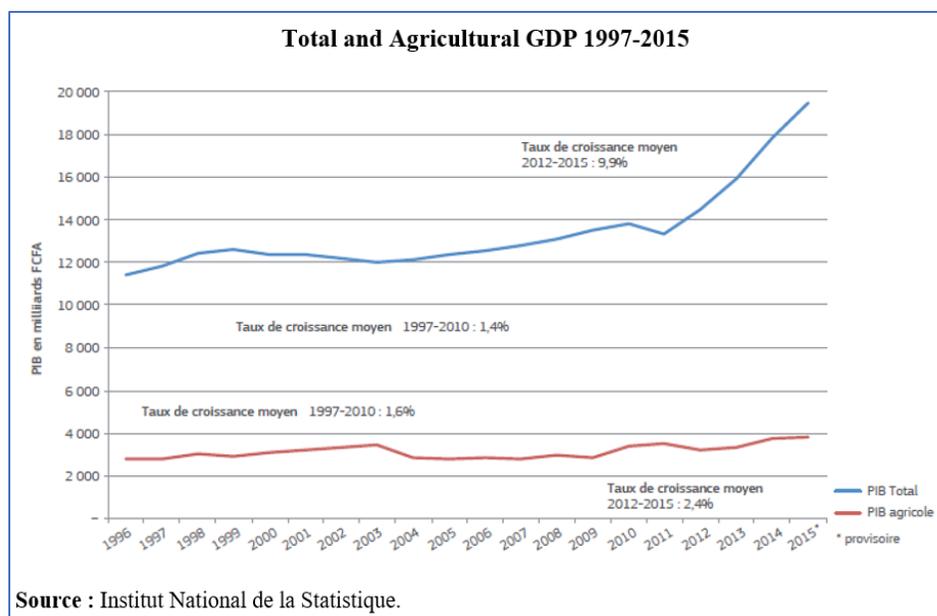
1.2. Agriculture and national economic growth

13. **Côte d’Ivoire has built its economic development on agriculture.** Its exceptional performance in cocoa, for which the country is the world’s largest producer with 40% of the world supply, is well-known. Côte d’Ivoire has also become the largest world producer of raw cashew nuts. It remains the largest exporter of rubber, palm oil, bananas, pineapples and copra in Africa, and the second producer of Robusta in Africa (ranking 7th in the world)⁷. The country is also self-sufficient in a variety of staple foods – maize, sorghum, millet, yam, cassava, plantain banana – with growing exports to the sub-region. The only exception is rice for which total imports represent 50% of the country’s domestic demand.

14. **The strong performance of Cote d’Ivoire’s agriculture in the early years of independence is the result of favorable agro-climatic conditions and conducive policies for private sector investment.** Roughly 75 percent of the country’s territory is arable, rainfall is generally plentiful, and the varied agro-climatic conditions permit the production of a wide variety of tropical crops. Agricultural development was a high priority attention during the presidency of Félix Houphouet-Boigny (1960-93), with parastatals playing a leading role in jump-starting the production of a number of export crops such as rubber and oil palm. The private sector, domestic and foreign, was also encouraged to invest in the sector. However, after its convincing early successes under the “Ivorian miracle”, agricultural growth faltered at the beginning of the 1980s because of an increasingly overvalued exchange rate until 1994, unfavorable international prices for the country’s main export crops (in particular cocoa and coffee), a sustained underinvestment in physical infrastructures needed to link producers to markets and the very limited access of producers (farmers and other actors along the value chains) to inputs/technologies and financing.

15. **In the last decade, agricultural growth has been modest.** The protracted political crisis which erupted in 2000 had a negative impact on the sector, because of widespread insecurity, heightened land tenure insecurity and an increasingly difficult producers’ access to markets because of the degradation of transport and marketing infrastructure and the many roadblocks that considerably increased transport costs. This crisis also undermined public governance. Cooperatives and other producer organizations succumbed to political and personal interests, and the critical cocoa sector became rife with corruption. Agricultural growth averaged 1.6 % per annum over the 1997-2010 period and, at best, stagnated from 2003 to 2010. During the recent period of fast economic growth, agricultural performance has been modest, averaging 2.4% over the 2012-15 period.

⁷ Nigeria is the largest producer of palm oil but mostly for its domestic consumption. Cameroun banana exports are comparable to those of Côte d’Ivoire. Cote d’Ivoire has also been in the past the largest sub-Saharan producer/exporter of coffee (Robusta) and cotton and, although Cote d’Ivoire lost its rankings for these two commodities, both remain significant, along with sugar.



16. **The agricultural sector has not yet fully met its contribution potential for growth and poverty reduction.** Agricultural growth has been essentially based on the rapid colonization of the country’s rich natural resources, especially in the Southern part of the country’s where expansion has been at the expense of Cote d’Ivoire extensive natural forests, largely by migrants (internal and external) establishing small farms and using land extensive methods with low yields. Starting in the beginning of the 80’s, the sector’s competitiveness was suppressed by an over-valued exchange rate and farmers’ income continuously depressed, particularly for cocoa and coffee, by a high taxation to finance the development of infrastructure and state-led industrialization. Little investments were observed in research and technology development and dissemination. From the 1990s, the poor maintenance of the existing infrastructure resulted in a marked degradation of the rural road network that increased the cost of inputs and decreased the farm-gate output price. Thus, most jobs created in agriculture have had a low productivity and generated incomes too low to reduce poverty and support the development of a vibrant rural economy. From 2011, after the crisis, there was not much improvement in the rather “business as in the past” policy with: (i) minor public investments in agriculture, much lower than the recommended Maputo target of 10% of public expenditures; (ii) continued high taxation (cocoa, cashew, rubber), with Government policies shifting from a “laissez-faire” attitude to very state control oriented policies supporting the establishment of public regulatory bodies managing key export *filières* (CCC, CCA, CHP); (iii) a lack of support for development of strong producer associations involved in policy-making and that could be the basis for the emergence of a modern, contractual agriculture; and, (iv) wide-spread governance issues.

17. **Cote d’Ivoire can draw lessons from peer countries in defining its pathway to structural transformation for inclusive growth and poverty alleviation.** As illustrated in the

2015 Cote d'Ivoire Country Diagnostic⁸, a comparison of the economic and social policies (and their outcomes) of two countries with similarities to Côte d'Ivoire but which achieved much better results—Ghana and Sri Lanka—offers important lessons for Côte d'Ivoire future pathway to growth and poverty alleviation. This analysis can help in identifying the main pathways to sustained growth and poverty reduction for Côte d'Ivoire.

- (a) The *first* main pathway entails the sustained development of the agriculture sector through a shift from a factor-based growth to an efficiency-driven agricultural development. Both Ghana and Sri Lanka adopted policies to increase agricultural productivity and diversify the agriculture sector, which also helped develop the rural economy more broadly;
- (b) The *second* pathway, beyond progress in developing their agriculture sectors, is to diversify away from dependence on agriculture by promoting private sector-led growth in non-agriculture sectors, including the agro-business and non-agro-business sectors, in which the country has a comparative advantage, and with higher value-added that can support structural transformation;
- (c) The *third* main pathway to attaining inclusive growth is to build human capital. While sound economic policies helped Ghana and Sri Lanka to establish sustained growth, a set of social policies appears to have been critical in reducing poverty. Both Ghana and Sri Lanka substantially increased allocations to the education and health sectors, and made efforts to increase expenditure efficiency, with a special focus on rural areas and preparing the work force for the changing labor market. In addition, Sri Lanka put in place social protection programs to address vulnerability and prepare the shift from a rural to an urban labor force that accompanies structural transformation of the economy; and
- (d) Finally, the *fourth* pathway is to establish an environment conducive to private-sector led growth. Both countries made a strong commitment to create a business and governance environment able to attract private investments.

18. Cote d'Ivoire has a strong potential for sustained agricultural growth in the future that can only be unleashed by addressing key structural sector issues. It benefits from a generally favorable climate and a considerable and still underutilized endowment of arable land. The strong growing global demand from its main crops at domestic, regional and international levels represent. Achieving this potential will require decisive actions addressing the key constraints that negatively affect the growth of the sector and rural poverty reduction, through:

- (a) First, improving agricultural productivity by facilitating access to technology and developing farmer skills;

⁸ From crisis to sustainable growth, Priorities for ending poverty and boosting shared prosperity, World Bank, June 2015

- (b) Second, improving access to markets by the rehabilitation/expansion of rural infrastructure and developing information systems;
- (c) Third, improving the sustainable management of the country's natural resources, natural forest, land, water, in a context of increasing population pressure;
- (d) Fourth, increasing the overall policy environment of the sector by eliminating excessive and distortive tax policies and addressing market failures towards a financial inclusion of agricultural enterprises and rural households;
- (e) Finally, promoting the structural transformation of the agricultural sector by promoting the emergence of contractual agriculture and efficient value chains.

19. Sector opportunities for growth, issues and recommended strategies/actions to address them, are discussed in more detail in the sections below.

2. STATE OF THE AGRICULTURE SECTOR

2.1. Main characteristics of the sector.

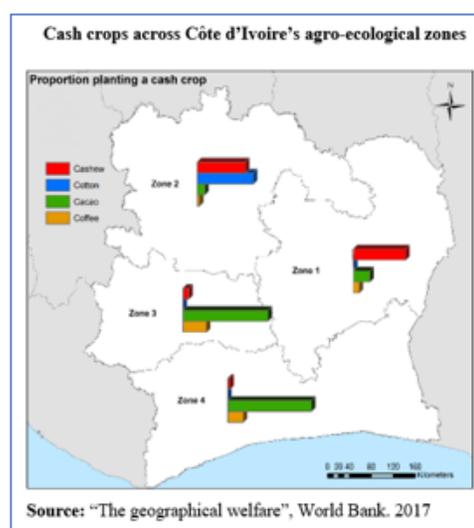
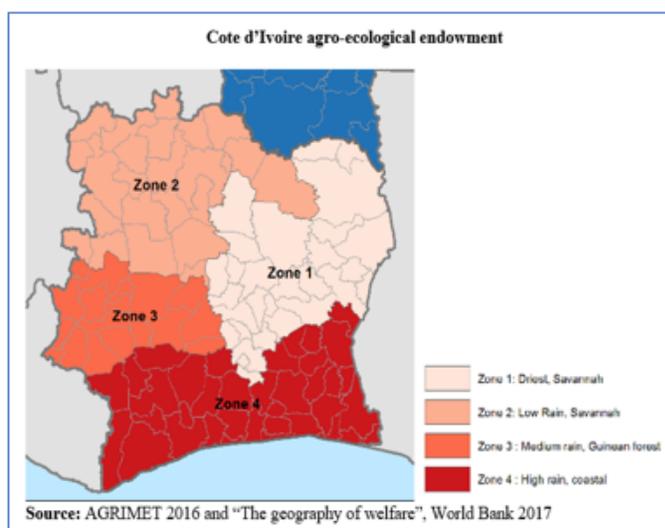
20. **The agricultural sector accounts for about 23 percent of Cote d'Ivoire's total GDP and over two-thirds of all exports.** In addition, a considerable share of the manufacturing and transport sectors depends on agriculture. Agro-industries represents about 7% of total GDP and 50% of the manufacturing sector. The production of palm oil and palm oil-based consumer products, cocoa and coffee processing, cotton ginneries and cotton oil production, rubber and sugar factories provide the main base of the national industry, while the domestic trade and transport industry (trucking, rail, port) depends on this sector for a large part of its business – 2.0 million tons of cocoa, 2.2 million tons of oil palm bunches and 450,000 tons of palm oil, 700,000 tons of cashew, 400,000 tons of seed cotton, 390,000 tons of bananas, 500,000 tons of rubber and over 10.0 million tons of food crops (yams, cassava, plantain, maize and rice), including various inputs such as fertilizers and pesticides. The agriculture sector employs around 45% of the labor force⁹.

⁹ In rural areas, 72.6 percent of the employed population work on family farms, and 16.3 percent are self-employed outside agriculture. Agricultural self-employment is relatively more prevalent in the north, with nonagricultural self-employment relatively more common in the south.

Secteurs	1996	2000	2004	2008	2009	2010	2011	2012	2013	2014	2015*
Secteur primaire:	24,6%	25,0%	23,6%	22,7%	21,2%	24,6%	26,3%	22,2%	20,9%	21,1%	19,6%
Agriculture vivrière	13,3%	13,2%	13,5%	13,1%	11,8%	11,6%	12,0%	10,9%	10,4%	11,1%	10,0%
Agriculture industrielle et d'exportation	8,5%	9,2%	7,3%	7,1%	7,3%	10,9%	12,2%	9,4%	9,1%	8,6%	8,4%
Elevage	1,8%	1,9%	1,8%	1,7%	1,6%	1,6%	1,6%	1,6%	0,9%	1,0%	0,9%
Pêche	0,3%	0,3%	0,2%	0,1%	0,1%	0,1%	0,1%	0,1%	0,1%	0,1%	0,1%
Sylviculture et exploitation forestière	0,7%	0,4%	0,8%	0,7%	0,4%	0,4%	0,4%	0,2%	0,4%	0,3%	0,3%

Source: comptabilite nationale

21. **Agricultural activities, productivity and poverty are closely linked to the country’s different agro-ecological zones.** The Northern part of the country, drier, is markedly poorer and has a larger share of the total population employed in agriculture than the Southern region. The map below presents the four main agro-ecological zones of the country.



- **Zone 1** represents the Sahelian and Sudanian savannah areas, the driest of all four zones. There is only one relatively short rainy season, with an annual precipitation level of 1,000–1,100 mm. The main cash crop is cashew, with some cotton. The main food crops are yams and maize. This is also a region favorable to extensive livestock production.
- **Zone 2** is also characterized by unimodal rainfall patterns, with slightly higher precipitation levels (1,100–1,300 mm per year) and a longer rainy season. The main cash crops are cotton and cashew, with some mangoes, the main food crops maize and rice.

- **Zone 3** receives even more plentiful rainfall (1,250–1,500 mm). The main cash crops are cocoa and coffee, with some rubber and oil palm, the main food crops rice and plantain.
- Finally, **Zone 4** has the most abundant rainfall (from 1,800 to over 2,500 mm from east to West) and the most fertile soil. It produces a large variety of cash crops (cocoa, rubber, oil palm, bananas, pineapple... The main food crops are cassava, rice and maize.

22. **The sector is dominated by individual/family farms of a relatively small size cultivated over 17 million hectares.** According to the latest land use survey carried out by BNETD¹⁰, 53% of arable land is cultivated in Cote d'Ivoire, or roughly 17,0 million ha out of the 24 million of cultivable land. Out of this, 7.2 million ha are cultivated under tree crops¹¹. The total number of farms¹² today can be estimated at around 1.7 million. This represents an increase of about 500 000 farms households in 13 years, since the last 2001 national agricultural census, or about 2.5% per year over the period. The 2001 national agricultural census indicated that about 75% of farms less than 5 ha in size (about 75% of all farms) represented a little more than 25% of the total cultivated area, while farms greater that 20 ha (3% of total farms) represented 25% of cultivated areas. Industrial estates represent about 160,000 ha (4% of total cultivated ha) and individual/family farms and small estates, about 4,200,000 ha (96%).

Number of farms and cultivated areas							
Farm size	Number	%	Total %	Total area	%	Total %	Average size
< 0,5 ha	311 609	27,88	27,88	84 162	1,93	1,93	0,27
0,5 à 1 ha	158 825	14,21	42,09	118 321	2,72	4,65	0,74
1 à 3 ha	249 072	22,28	64,38	444 702	10,22	14,87	1,79
3 à 5 ha	125 835	11,26	75,63	463 745	10,66	25,53	3,69
5 à 10 ha	148 516	13,29	88,92	967 115	22,22	47,75	6,51
10 à 20 ha	91 416	8,18	97,10	1 178 444	27,08	74,83	12,89
20 à 50 ha	32 395	2,90	100	1 095 174	25,17	100	33,81
TOTAL	1 117 667	100		4 351 663	100		3,89

Source : RNA 2001

23. **Most individual family farms are small-sized and apply traditional farming practices.** Family farms are usually relatively well diversified, producing a combination of food crops and cash crops (food crops, largely for their own consumption, and one or more cash crops such as cocoa, rubber, oil palm, cotton...). There is a growing number of SMS farms which are using more intensive production systems and producing exclusively for the market, in agriculture. Industrial estates are involved in the production of rubber, oil palm, sugar and

¹⁰ Bureau national d'études techniques et de développement (BNETD), Remote sensing land use survey, REDD+, 2019.

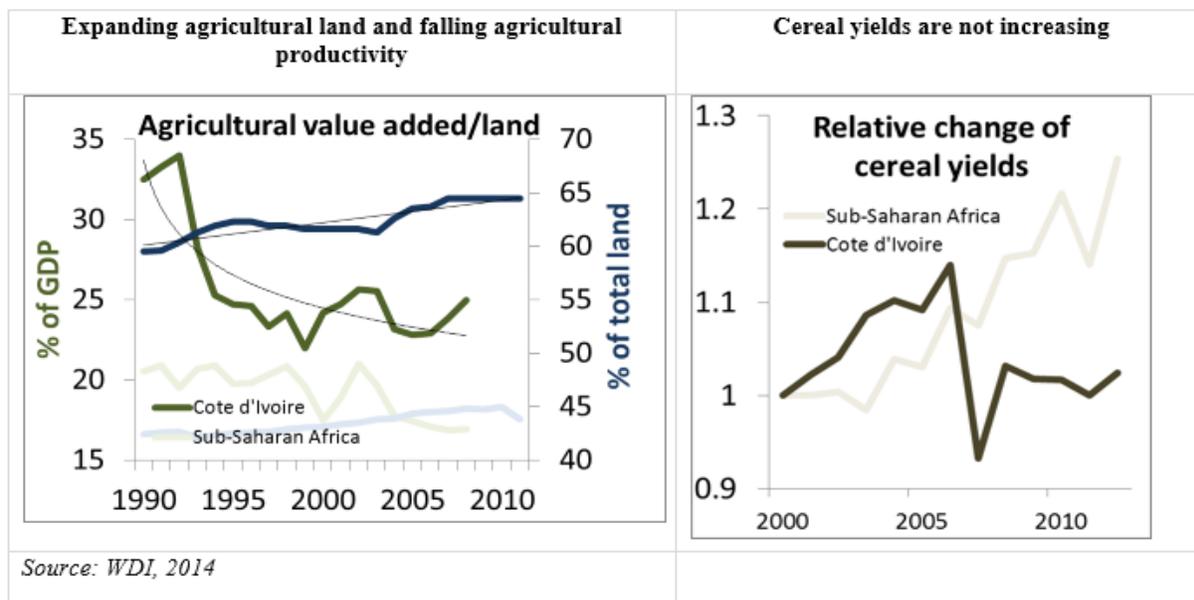
¹¹ Coffee-cocoa 4.8 million ha, cashew 1.4 million, rubber 0.62 million and oil palm 0.45 million.

¹² Recensement National Agricole 2001 and RGPH 2014

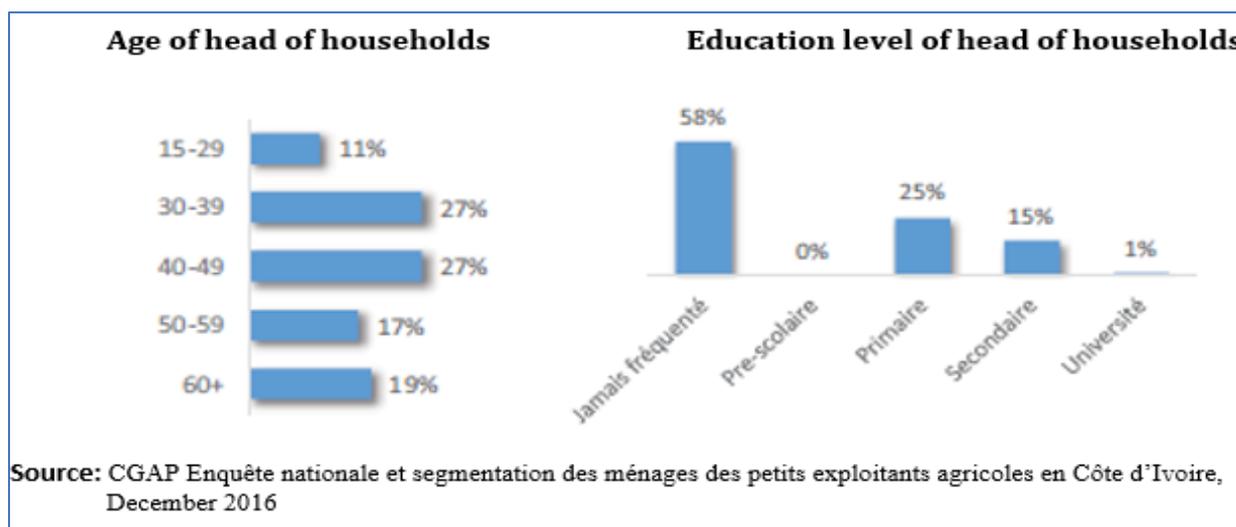
bananas/pineapple. Their importance goes much beyond their small importance in terms of cultivated areas, as they play a leading role in the structuring of their value chains and providing access to markets and technologies to other producers in the value chains.

24. **The use of inputs and productivity remain low.** Although there are clear signs of intensification, the cropping systems of family farms are still extensive, largely manual and using little modern agricultural inputs (fertilizer and improved seeds) except for cash crops. Available data indicate that about one-third of traditional farmers use some improved agricultural inputs. The largest consumers of fertilizers (and of phytosanitary products) are industrial crops (cotton, palm oil, bananas, cocoa...) and rice for food crops. Fertilizer consumption was about 18 kg/ha (cultivated) in 2016, rebounding to its 2002 level after a steep decline during the 2000s (13kg/ha in 2009). Improved planting material is used largely only on cash crops (cotton, rubber, oil palm, to a lesser extent cocoa), although many producers of these crops still do not use improved material. For food crops, only a small number of commercial farmers (maize, rice, cassava) use improved planting material. Most small holders do not (only 7% of rainfed rice producers use improved seeds). Family farms are also very decapitalized: less than, 1% have a tractor, about 50% of cotton producers use animal traction (90% in Mali).

25. **As a result, observed yields in most individual farms are low.** The average yields for rice range from 1 ton to 3 tons of paddy per ha in rainfed and irrigated systems respectively (compared to 5.5 ton/ha in Vietnam). Maize yields average 2 ton/ha; cassava 8 ton/ha; cocoa 550 kg/ha (compared to 1.5 ton in Vietnam); coffee 100-150 kg/ha; cashew 400 kg/ha (compared to 2 tons in Vietnam); oil palm 7 tons/ha (for small holders) to 18 tons/ha (for industrial estates). Only rubber and cotton yields attain satisfactory levels with 1.7 ton/ha and 1.2 ton/ha respectively.



26. **The sector is characterized by an aging farming population with low education level.** More than half (54%) of the producers are between 30 and 50 years old and another 36% are over 50 years old. Thus, only 10% of farmers are less than 30 years old (the new generation of producers). More than half (58%) of the heads of farming households (58%) have never been to school and only 15% have more than primary education.



2.2. Policies and institutional framework

27. **The importance of the agriculture sector for poverty alleviation and economic growth has long been recognized by the Ivorian Government in its successive Economic Development Plans.** Among the main instruments that can be used to promote equitable agricultural growth are government's fiscal policies (subsidies and taxation policies) and other measures to promote private investments and public expenditures funding critical services (extension, research, etc...) and investments, or compensating market failures. Government spending is one of the most direct and controlled methods and is viewed as key for achieving the target of 6 percent annual growth rate in agricultural GDP adopted by NEPAD under the Comprehensive Africa Agriculture Development Program (CAADP) and all African countries. To achieve this objective, the Maputo Declaration adopted by African leaders called for a 10 percent budget allocation to agriculture¹³. Côte d'Ivoire has subscribed to this vision. In addition, government policy clearly aimed at promoting private investments in the sector as well as the emergence of efficient value-chains supporting contractual agriculture. contractual agriculture.

¹³ According to the IFPRI's calculations for Africa as a whole, a 1% increase in agricultural spending was likely to bring about a 0.36% increase in agricultural growth. The famous 10% was supposed to allow most countries to attain the 6% agricultural growth supposedly needed to halve extreme poverty and hunger by 2015 or 2020 (the first Millennium Development Goal).

28. **The National Program for Agricultural Development 1992-2015 (*Plan Directeur de Développement Agricole –PDDA 1992-2015*) framed agricultural policy and spending over the last 25 years.** The PDDA had three main thrusts : (i) improving the competitiveness of the sector, with a focus on productivity; (ii) the country's food security (meant as food self-sufficiency) and (iii) the rehabilitation of the country's forest resources. This national framework was the basis for rural poverty reduction strategies (in particular after the devaluation of the CFAF in 1994 (the *Programme National de Lutte contre la Pauvreté* of June 1997, then the *Document Intérimaire de Stratégie de Réduction de la Pauvreté (DSRP-I)* of January 2002). These documents focused on (i) the modernization of the agricultural sector; (ii) the withdrawal of the State and the liberalization of the sector and (iii) investments for the establishment and/or renovation of rural infrastructure. Several laws and strategies were adopted under the PDDA including the Law on cooperatives (1997), the Law on Rural Land (1998), the 1988–2015 Forestry Master Plan 1886) or the Cotton Development Strategy (2008). Under the PDDA, the privatization of public agro-industries continued until 1999, with nearly all of the agri-food industries being sold to the private sector. The marketing monopolies and oligopolies were dissolved. The coffee-cocoa pricing mechanism was liberalized through automatic indexation to world prices, and the same principle was applied to the majority of agricultural commodity exports. Several actions were also taken to encourage agricultural modernization, the organization of agricultural stakeholders, and the implementation of more effective management tools. These actions included the establishment of a single extension agency (the National Rural Development Support Agency - ANADER), the strengthening of agricultural research through the creation of a single Agricultural Research Institute (the National Center for Agricultural Research - CNRA), the establishment of an innovative research and extension funding mechanism funded through levies on the main export crops (the Fonds Interprofessionnel pour la Recherche et le Conseil Agricole – FIRCA) and the promotion of cooperatives and producers' associations.

29. **The objective of the National Agricultural Investment Plan 2010-2015¹⁴ was to support an overall agricultural growth of 9% per year over the period.** To support a fast and sustained economic development of the country after the long and protracted crisis that had deeply affected the agricultural sector, the new government adopted a new development strategy in 2012, the National Development Plan 2012-15 ("*Plan National de Développement 2012-2015*" -PND), which aims to decrease poverty by 50% by 2015. The PND planned to allocate 8,5% of its overall cost to agriculture. The National Agricultural Investment Plan 2010-2015 ("*Programme National d'Investissement Agricole—PNIA*"), adopted in 2010 but adjusted in 2012 was the agricultural part of the NDP. It was prepared under the leadership of NEPAD's CAADP and fully aligned on the West African Economic Community Agricultural Policy (ECOWAP)¹⁵. Its main objectives were to : (i) improve the productivity and competitiveness of crop, livestock, and fishery productions; (ii) develop agro-processing; (iii) strengthen the capacities of stakeholders involved in agricultural development (iv) strengthen the activities of the fishery and aquaculture sectors; (v) improve the sustainable management of livestock production; (vi) strengthen/improve the activities of the

¹⁴ The PNIA was extended to cover 2016.

¹⁵ Approved by member states of the Economic Community of West African States (ECOWAS) in 2005

timber and forestry sector; and (vii) improve agricultural sector management, with a shift of Government's main role on its regalian functions of policy-making and regulation. PNIA total cost was CFAF 2,000 billion over the 5-year period. Actual expenditures however amounted to CFAF 800 billion, or 40% of plan and 2.8 % of total public expenditures over the period. Agricultural growth averaged 2.5% over the same period. Among the main reforms undertaken during the period were aimed at modernizing agriculture and organizing value chains, among which : (i) the adoption of the OHADA legal framework for Cooperatives and the approbation of the legal framework for the establishment of Interprofessions (2011); (ii) the reform of the cocoa/coffee sector, with the creation of the “*Conseil du Café Cacao – CCC*” (2011)¹⁶ ; (iii) the reform of the cotton sector, with the creation of the “*Conseil Coton-Anacarde – CCA*” (2013); and (iv) the adoption of a new Forestry Code (2014) . In addition, Cote d'Ivoire has adopted in 2015 a new « *Loi d'orientation agricole (Agricultural Framing Law LOACI)*»¹⁷ which give the main vision for the development of a modernized, competitive and contract-based agriculture. The law, long awaited, sets the main lines of the future agricultural development and states the main principles that will govern Government policy. However, while stating these principles, it remains vague on the « how ». Indeed, while the Law broadly supports a liberal vision of agricultural development, it also allows considerable freedom to the Government to choose and impose the operational modalities of its action and to assume again responsibilities that had been gradually transferred to the private sector after the beginning of the 1990s. Also, the law insists on the « concertation » with Local governments and professional organizations but doesn't define the mechanisms for this “concertation” and the responsibilities of these partners. Many operational modalities are left to implementation decrees that have never been taken.

30. The Second National Agricultural Investment Plan 2017-25 (NAIP2)¹⁸ focuses on productivity, processing and a better management of the agriculture/natural resources interface. The Second NAIP was approved in 2016 and is just starting to be implemented. It is the sectoral counterpart of Cote d'Ivoire's National Development Plan 2016-20 and is in line with the main regional policies and programs (NEPAD' CADDP, ECOWAP+10, MDGs...). Its cost over the 8-year period is CFAF 4,300 billion (CFAF 540 billion/year or nearly twice the annual allocations under the PNAIP1). Based on the allocations fixed under the NDP, its planned cost represents about 4.5% of total public expenditures, still below the 10% Maputo target. With actual implementation likely to fall short of expectations, this level will be even lower. It envisages to be able to mobilize very large private investments in the sector, something that didn't really materialize under the First NAIP (excluding investments by small-holders), but this will depend essentially on the attractiveness of the business environment (see below) and perceived political risks. Its stated objective is to promote a fast, equitable and sustainable agricultural growth, with a focus on productivity, processing and a better management of the agriculture/natural resources interface. It also incorporates the main lessons from the NAIP1 concerning the need to strengthen efforts to increase agricultural productivity and incomes, support a more equitable development strategy, improve food and nutritional security, reduce the impact of agricultural development on

¹⁶ which was a condition for HIPC completion

¹⁷ Loi n° 2015-537 du 20 juillet 2015

¹⁸ In fact, covers 2018-25.

the country's natural resources, in particular its forests, to mitigate climate change and finally improve the management of the sector (better coordination between sub-sectors and better governance). The NIAP2 includes six main specific programs¹⁹ similar to those under the first NAIP, but with a sharper regional focus for agricultural development through the definition of nine regional « Agro-Poles » where all programs and activities for which a particular “Agro-Pole” has a competitive advantage will be implemented in a coordinated fashion. Finally, as stated before, the NIAP2 focuses very strongly on the mobilization of private investments through the improvement of the business climate and the promotion of synergies between small producers, SMS agricultural enterprises and large agroindustrial concerns.

2.3. Public Expenditures

31. **Overall, the level of public expenditures in the sector has been greatly insufficient.** As indicated by the Agricultural Public Expenditure Review conducted by the World Bank for the

Year	PAE	GDP	Ag GDP	Ag GDP/ GPD	PAE/ GDP	PAE/Ag GDP
1999	49.13	7,731.00	1,700.00	22.00%	0.60%	2.90%
2000	38.75	7,416.70	1,796.00	24.20%	0.50%	2.20%
2001	91.56	7,730.10	1,909.30	24.70%	1.20%	4.80%
2002	45.61	8,006.07	2,053.90	25.70%	0.60%	2.20%
2003	46.77	7,984.23	2,040.40	25.60%	0.60%	2.30%
2004	47.7	8,178.43	1,895.90	23.20%	0.60%	2.50%
2005	37.84	8,631.19	1,969.30	22.80%	0.40%	1.90%
2006	45.95	9,081.19	2,081.80	22.90%	0.50%	2.20%
2007	45.26	9,487.42	2,263.10	23.90%	0.50%	2.00%
2008	51.15	10,485.03	2,619.00	25.00%	0.50%	2.00%
2009	62.89	10,879.94	2,682.80	24.70%	0.60%	2.30%
2010	61.02	11,352.14	2,588.70	22.80%	0.50%	2.40%
Average	51.97	8,913.62	2,133.35	23.90%	0.60%	2.50%
Annual mean growth rate	1.99%	3.55%	3.90%	0.33%	1.51%	-1.84%

Source : Revue diagnostique des dépenses publiques dans le secteur agricole en Côte d'Ivoire période 1999-2012.

period 1999-2012, public spending for agriculture has remained much lower than the Maputo target, and also much lower than that of some of the other African countries such as Burkina Faso, Ghana, Mali, Niger Malawi and Ethiopia. During that period, public spending for agriculture averaged about 3.9% of the total budget. Agricultural expenditures as a percentage of agricultural output, possibly a more appropriate measure of government support, was also very limited, averaging only 2.5 percent

from 1999-2012. This low level of public expenditures in favor of agriculture was continued during the 2010-15 period (2.5% of total public expenditures against 7% planned) under the first National Agricultural Investment Plan 2010-2015 (“*Programme National d’Investissement Agricole—PNIA*”).

¹⁹ Program 1: productivity; Program 2: value added and markets; Program 3: sustainable management and climate change; Program 4: improvement of incomes and living conditions; Program5: access to finance and private investments; and Program 6: strengthening of institutional framework and governance.

32. **The quality of agricultural spending in terms of its relevance and efficiency is not proven.** Over the 1999-2012 period, priority was given to crops (80% of expenditures) over the livestock, fisheries and forestry sectors, in line with the sub-sectors' respective share of the Ag GDP but probably not with the needs to diversify the sector's output or to better protect the country's natural forests. Public expenditures in favor of agricultural research was also too low at 7% of the agricultural sector's expenditure and 0.23% of agricultural GDP, much lower than NEPAD's objective for agricultural research (at least 1% of Ag. GDP). Finally, although planned expenditures aimed at striking a balance between expenditure types, with precedence given to investment (36%) followed by non-wage expenditure (33%) and the smallest share going to wages, budget execution rate was low (6%) and actual expenditures were heavily tilted in favor of recurrent expenditure (80%), including wage (48%) and non-wage expenditure (35%), with investments representing only 20%.

3. OPPORTUNITIES FOR SECTOR GROWTH

3.1 An increasing demand for food crops

33. **The national market for food crops will be a major driver of agricultural growth.** Domestic demand for food crops and animal products should grow significantly faster than the rate of population growth (3-4% against 2.0% percent p.a.) due to rising income, urbanization, and the demand for maize, sorghum and cassava for animal feed. The demand for staple crops (cassava, yam, maize) will also permit to achieve a higher rate of growth in this sector. Finally, there is also a significant growth potential through the substitution of the importations of rice (1,3 million tons in 2016, 3.5 % of total imports)²⁰. This will however require that domestic production can be competitive with imports;

34. **The regional market also offers considerable opportunities for Ivorian products.** Although growing steadily, regional food crop production has been struggling to keep up with the steady increase in the regional demand over the last decade, The ECOWAS dependency in food imports has risen considerably in recent years, notably for certain staple products such as cereals

Projected International prices Constant US\$		
Commodity	2019	2030
Cocoa (kg)	2.21	2.38
Coffee Robusta (kg)	1.68	1.75
Rubber (kg)	1.64	1,90
Palm oil (mt)	578	715
Cotton (kg)	1.81	1.75
Source: WB Commodity price forecast, April 2019		

(rice), vegetable oil, sugar, milk/meat and fish (the region's agri-food trade balance has recorded a shortfall of approximately 3 billion dollars over the 2008-2011 period and food products represent about 20% of. total imports). The total population of West Africa will reach 515 million by 2030 and to 850 million by 2050 (see above) and the rapid urbanization of the population combined with a steady increase in income levels will offer important

²⁰ Cote d'Ivoire currently imports 1/2 of its needs or about 1.0 million tons out of a total consumption of 2.0 million.

opportunities to Ivorian producers if they can be competitive with regional producers and extra-regional imports (in price and quality)²¹.

3.2. Structural demographic and economic trends

39. **Long-term structural trends will influence the context in which Cote d'Ivoire's agriculture will need to grow and compete.** Cote d'Ivoire will experience further urbanization from 50% currently to an estimated 66% in 2050, combined with a large expansion in its middle class. This will drive major changes in the dietary patterns and food expenditures of domestic consumers with an increased consumption of animal products, fruits and vegetables, and processed foods. The share of primary agriculture in gross domestic product (GDP) will decline, yet the share of the broader agro-food system (processing, distribution, services etc...) will increase, in line with patterns observed in other developing countries. The contribution to Ag.GDP of agro-industry, together with food distribution and logistical (and other) services is expected to overtake that of agricultural production. Significant changes will occur in terms of agricultural land-use, because of economic forces, environmental concerns and climate change impact. The role of government and the private sector will also need to continuously adjust with political changes and the development of the private sector capacity to influence policies and organize efficient production and value chains.

40. **Growth in the food crop sector will continue to have a major impact on overall growth, poverty alleviation and the country capacity in meeting the country's increasing demand for food.** Food demand is projected to grow by about 55 percent in West Africa during the next 15 years. The food system (production, storage, transport, processing, restauration and other services) will present a major opportunity for creating jobs. Indeed, it includes many small enterprises and represents a relatively large share of jobs in the manufacturing and services industries. For instance, food and beverages account for more than 40 percent of total manufacturing employment in Malawi and Tanzania.

42. **Food consumption patterns are changing in both rural and urban areas.** While staple crops will continue to be important, as incomes increase, diets tend to shift to higher value and processed products from cereals and tubers to vegetables, horticulture, livestock, and fisheries. Many of these higher value crops, such as horticulture crops, have multiple times higher labor use per hectare than staple foods. Also, food demand growth will increase job opportunities in off-farm food management and transformation. The development of value chains with more food distribution, processing, value addition, and food preparation and services, will enable newer non-agricultural employment opportunities in the food system. For example, an analysis of six African countries (Ethiopia, Malawi, Mozambique, Tanzania, Uganda, and Zambia) shows that the food system is projected to add more jobs than the rest of the economy between 2010 and 2025, with

²¹ UN Population Division 2016.

projected employment shares in farming decreasing from 75 percent to 61 percent and jobs in the broader non-farm food system (food manufacturing, food marketing, transportation, and food preparation) projected to increase from 8 percent to 12 percent over the same period²².

As per-capita incomes rise more food system jobs will be in processing and services

In low-income countries, the food system tends to dominate total employment in both rural and urban areas. For example, the findings of a recent review of six Eastern and Southern African countries shows that the food system accounts for more than 80 percent of all jobs. Within the food system, over 90 percent of jobs are in farming (including self and wage labor), and most non-farm jobs in the food system are in food services (transportation and marketing), accounting for 6 percent of food system jobs, which is double those in food manufacturing/industry. These shares are a reflection of dominance of staple grains in production and consumption in these countries. In addition, about 75 percent of food manufacturing jobs and 60 percent of food services jobs are in rural areas.

In middle-income countries, within the food system, farming accounts for closer to half of the jobs, with off-farm jobs in food manufacturing and services accounting for the other half. There is also a more even share of jobs in each food manufacturing and food services (for example, about 25 percent each, in the case of Brazil). There is a large variation across countries. For example, in countries where the share of primary agricultural commodity exports is large (such as in Argentina), the food services share (inclusive of logistics [transportation and ports]) is likely a larger share.

In high-income countries, within the food system, farming accounts for a smaller share of jobs, while food services accounts for most jobs. For example, in the US, farming accounts for about 20 percent over overall food system jobs, food manufacturing accounts for 14 percent of jobs, while food services accounts for about two-thirds of jobs in the food system. Part of the contribution is restaurant services, as half of household income spent on food is on consumption away from the home.

Source: Future of food, World Bank, 2017

3.3. Exports diversification potential

43. **Tapping into the country's exports potential can create long-term economic growth.** With the demand of the domestic market (focused largely on food items) expected to grow at about 3-4% per annum, the development of agricultural exports may sustain long-term economic growth at the level needed to make a significant impact on rural poverty. As already mentioned, the complexity of Côte d'Ivoire's current exports is low compared with other emerging countries. Currently, Ivorian agricultural exports represent about 70% of the country's total exports, are dominated by unprocessed commodities and are concentrated on a few products (cocoa representing over 50% of all exports). Although cocoa exports will continue to be the mainstay of Cote d'Ivoire's exports for quite some time, it will be important to: (i) diversify the country's agricultural exports, to reduce the dependence on cocoa products; and (ii) increase their value added by improving quality, to meet increasingly stringent public (food safety) and private standards (environmental and social concerns) and developing processing. Efforts to foster export diversification should start with the identification of potential high-growth export products in which the country would have a clear comparative advantage. Côte d'Ivoire's ability to upgrade

²² D. J. Tschirely, J. Snyder, M. Dolislager, T. Reardon, S. Haggblade, J. Goeb, L. Traud, F. Ejobi, and F. Meyer, "Africa's Unfolding Diet Transformation: Implications for Agri-food System Employment," *Journal of Agribusiness in Developing and Emerging Economies*

its export mix will then depend on mobilizing private investments and the availability of the required skills.

3.4. Increasing value added through agro-processing

49. **Cote d'Ivoire has a significant agroindustrial sector.** The country is the fifth exporter of agroindustrial products in Africa, after South Africa, Egypt, Tunisia and Morocco. The agroindustrial sector represents around 50% of the total value added of the Ivorian manufacturing sector and 8% of total GDP, reflecting Cote d'Ivoire comparative advantage for agriculture. Currently, about 50% of the total agroindustrial output is absorbed by the domestic market (vegetable oil, milled rice, sugar and beer) and 50% is exported (cocoa products, vegetable oil, rubber, cotton fiber, wood products). Agroindustrial products represent about 30% of Cote d'Ivoire's total agricultural exports which are still dominated by unprocessed commodities. Agroindustrial exports are relatively low in complexity/value added, largely products from primary processing (cocoa products, cotton fiber, natural rubber). Primary processing of cocoa dominates the sector with 40% of the total value of the agroindustrial production and 80% of total value of exports. However, its contribution to total value added is lower (20%), with the food industry (sugar, vegetable oil, milled rice and other consumer products) representing about 50%.

50. **The development of Cote d'Ivoire agroindustrial sector has a major contribution to make to economic growth and job creation.** The current lack of product sophistication in the agricultural sector has important strategic implications. Countries that have achieved a fast-structural transformation of their economies have all experienced a shift in their production toward high value goods for both their domestic markets and exports. Greater product sophistication, meeting the growing demand for more processed or fresh perishable products in local, regional and international markets, would permit to raise the unit value of Ivorian products as well as the sector's labor productivity and incomes.

52. **The development of the small and medium scale agroindustrial enterprises represents a major opportunity for future value addition and employment.** The Ivorian agroindustrial sector has a dual structure with: (i) a modern sector comprised of a small number of large enterprises (declared at "*Centrale des Bilans*" including only 21 enterprises with an annual turnover of more than US\$ 20.0 million), mostly focusing on exports, and (ii) several thousands of small and medium scale businesses largely catering to the domestic market (rice milling, food preparation and retail...). The second category is particularly important for employment and value addition. The large enterprises represent more than 90% of the total value of the agroindustrial production but about 40% of its total value added, with the average value added of the large agroindustrial enterprises at 17% of the value of output against 24% for the small and medium scale enterprises. Finally, the large, formal enterprises represent only about 15% of total employment in the sector (80,000 out of 550,000). The development of the SMS agroindustrial

enterprises thus represent a major opportunity for future value addition and employment both in urban and in rural areas

53. Where processing is labor-intensive, its development has a significant beneficial impact on employment. This is particularly true in Cote d'Ivoire for cashew processing. However, many agroprocessing activities are highly capital intensive and do create significant employment. This is the case for the processing of cocoa, rubber or oil palm. Processing in these sectors may be justified by its beneficial pull impact on the agricultural production concerned. In this case, processing is less justified if the commodity can be exported as raw and if the value added is small (and can be more than offset by losses to the state due to subsidies or other special treatment).

54. This appears to be the case for the primary processing of cocoa. The Ivorian government has set a strategic goal to increase primary processing to 50 percent of the country's total bean production by 2020 (i.e. about 1.0 million tons) and actively promote secondary processing activities to capture the value added generated by the production and distribution of "couverture" and chocolate-based products for the domestic and regional market. To do so, the Government has recently taken several measures to attract new private investments in cocoa processing including: (i) the reintroduction of a differentiated export tax (DUS) with rates that decline as the stage of bean processing increases (for companies which commit to increase their capacity by 7.5% within 5 years); and (ii) the establishment a specific window for export rights exclusively targeted at processors. These measures seem to be effective since several processors have already increased their capacity. Côte d'Ivoire currently processes (production of liquor, butter and cake) about 30 percent of its production (installed capacity of about 700 000 tons of beans a year and actual processing of 530,000 tons in 2018, out of a production of about 2.0 million tons/year). It is now the largest primary processor in the world before The Netherlands.

56. The strategy for the development of the country's agroindustrial sector will need to address several issues in targeted value chains. Such issues involve the nature of the product, the value added of specific processing activities, their importance in the overall value chain (including its indirect vertical and horizontal impacts on related activities and job creation) and the availability of the necessary skilled labor force. Some agricultural products— such as fresh fruits or fish -- fetch a higher price than the processed alternative. The value-added in these instances lies in the efficient management of the supply chain to deliver a perishable product (sorting, packaging, cold chain) which respects stringent phytosanitary standards, and ensure traceability. There are also commodities that are easily exportable in their raw state, such as cocoa and coffee beans. Then the questions are: (i) how much processing is required, if at all, to optimize domestic value added; and (ii) the distribution of this value added along the value chain, and the potential for job creation. Finally, developing agro-industrial activities will require a labor force with new skills/capabilities both transversal (general education) and technology and/or product specific.

Currently, Côte d'Ivoire lags in this area and a significant and sustained investment in human capital will be needed

4. MAIN SECTOR STRUCTURAL ISSUES

55. Cote d'Ivoire has important assets for developing its agriculture and respond to market opportunities structural economic trends. It benefits from: (i) a very good ago-climatic conditions; (ii) a considerable potential for productivity gains; (iii) a reasonably developed road network and good communication/connectivity infrastructure; (iv) a developed institutional environment, with a mix of small farms and large/industrial producers, and a few very well integrated value chains.

56. The country's natural resources endowment can support a sustained increase in the production of a wide variety of crops. Rainfall is generally abundant ranging from 3,000 mm in the South West to 1,000 mm in the North. The country is also rich in surface water. Roughly 75 percent of the country's territory is arable (24 million out of 32 million ha) with about 7.5 million ha currently cultivated (30% of total)²³. Hence, land is still relatively abundant at the national level, although it is becoming scarce in some regions in particular in the Southern part of the country where population density is high. It is estimated that the current average population density is 72 people per sqkm, probably around 40 people per sqkm in rural areas, with a wide difference between the Southern (where it can be above 150/sqkm in certain areas) and the Northern parts of the country (where it can be as low as 10/sqkm). In the Northern Savannah, pressure on the land is thus still relatively low, except around the main urban centers: only about 10% percent of cultivable land is at present under crops (which means that no more than 30% of land is effectively in use, making allowance for the fallow/cultivation ratio necessary at current levels of agricultural technology). In the Southern part of the country however, the current land reserves are probably close to exhausted (except within protected areas) and, with the average density of population expected to rise to 160 people per sqkm by 2050, natural resources should be managed in a more efficient and sustainable way. Cote d'Ivoire past agricultural development strategy, based on the extensive exploitation of its rich natural resource base, is no longer possible. Future agricultural growth will require a shift to a more intensive and sustainable production model, based on better farming practices, the spread of high-yielding varieties, greater use of fertilizers, and appropriate mechanization where possible.

57. Strong and sustained growth in agriculture will need a conducive overall business environment. Stable macro-economic policies and reasonable taxation on agriculture and agri-business activities can leverage private sector investment and unleash the sector untapped potential. There is a need for improved access to inputs, strong linkages to markets through

²³ According to FAO stat. No exact figures on land use currently available. This seems underestimated and may not include the required minimum fallow periods.

improved transport infrastructures and information systems, as well as increased access to finance and efficient marketing systems.

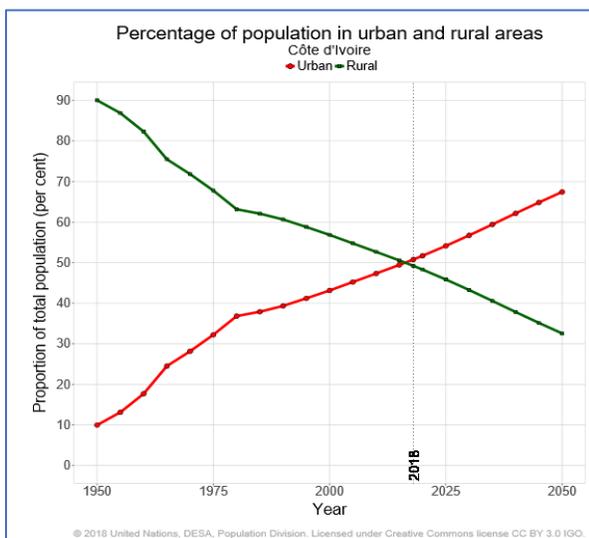
4.1 Agricultural productivity

58. **Increasing agricultural productivity will be key for improved competitiveness, efficient use of natural resources, meeting the demand of increasing urban population as well as rural poverty reduction.** Past agricultural growth has depended primarily on a growing labor

force and an expansion into new land. According to various estimates^{24,36,37,38} the annual average growth in TFP, after an improvement in the early 1960, declined until 2010. Over the long period, TFP growth averaged 0.6% with most of the observed TFP growth explained by improved efficiency rather than technical change. The use of the three most important factors of productivity – selected seed, fertilizer and agricultural machinery – is still very low. This reliance on extensive farming systems (except for a few export crops such as cotton) is illustrated by the fact that most of the growth over the last 50 years has come from the growth in production factors. With emerging land constraints (possible extension in cultivated land less 1%

Annual agricultural growth:	
- 1961-2010:	3.5%
- 2001-2010 :	1.5%
- 2005-2014 :	2.7%
Growth in Total Factor Productivity (TFP):	
- 1961-2010:	0.6%
- 2001-2010 :	0.1%
Weight and annual growth in production factors 2001-2014:	
- Labor :	26% et 2.7%
- Land :	33% et 2,7%
- Bétail :	31% et 2,4%
- Equipement/input :	10% et 2.0%

per year) and a slowing down in labor availability (an increase of possibly also 1% per year),



maintaining a 6% annual agricultural growth will require a steady increase in TFP of about 4% per year through an increase in: (i) the greater use of other inputs (seeds, fertilizer, mechanization, etc...); (ii) the efficiency with which these factors are used; and (iii) technical change. Few countries have been able to achieve such an increase in TFP over the long term (Brazil, China, Malaysia, Vietnam, Kenya and Ethiopia in Africa

in the 2000s)²⁵. Maintaining a 6% growth rate in agriculture will thus be a challenge and will require considerable investments in technology generation/innovation and a much better access to inputs, advice and finance.

59. **The country has just begun its structural transformation.** About half of its labor force continues to be employed in agriculture. According to the 2013 Employment Survey (ENSETE), 46.9 percent of the employed population is self-employed in agriculture, compared to 29.3 percent self-employed in non-agricultural activities and only 17.4% in wage jobs. The table below compares the evolution of the share of the agricultural sector in Cote d’Ivoire in overall GDP with that of Ghana and Sri Lanka (see above) as well as four other economies that share some similar features as Côte d’Ivoire and have reached “emerging market” status: Indonesia, the Philippines, Mauritius and Morocco. It clearly indicates that the transformation in Cote d’Ivoire has been much slower than in the comparator countries. In Ghana, the share of agriculture declined from 54 percent in 1970 to 22 percent in 2013, and in Sri Lanka from 28% to 11% over the same period. In both countries, there were large increases in the manufacturing and the services sectors at the expense of agriculture. In contrast, the structure of Côte d’Ivoire’s economy has remained broadly unchanged since 1970.

Côte d’Ivoire	1970	1980	1990	2000	2013
Agriculture, value added (% of GDP)	31.9	25.9	32.5	24.2	22.3
Industry, value added (% of GDP)	18.5	19.7	26.3	24.9	22.3
Services, etc., value added (% of GDP)	49.6	54.4	41.2	50.9	55.5
Ghana	1970	1980	1990	2000	2013
Agriculture, value added (% of GDP)	53.9	60.1	45.1	39.4	21.9
Industry, value added (% of GDP)	21.1	12.3	16.9	28.4	28.5
Services, etc., value added (% of GDP)	25.0	27.6	38.1	32.2	49.6
Sri Lanka	1970	1980	1990	2000	2013
Agriculture, value added (% of GDP)	28.3	27.6	26.3	19.9	10.8
Industry, value added (% of GDP)	23.8	29.6	26.0	27.3	32.5
Services, etc., value added (% of GDP)	47.9	42.8	47.7	52.8	56.8

Source: Cote d’Ivoire 2015 Country Diagnostic, World Bank, June 2015.

4.1.1 Use of technology and input use

60. **Current inputs use levels are low.** It is estimated that about 50% of all farms use only traditional, extensive systems, particularly in the center and the north, with no more than 10% practicing truly “intensive systems”. The reasons for this low level of intensification are many: (i)

²⁵ La croissance de la PTF agricole des pays d’Asie du sud et du sud-est et des pays d’Amérique latine pendant la période 2000-2010 a été en moyenne de 2,7% par an. Pour l’ensemble des pays au Sud du Sahara, elle a été de 1% par an, la croissance des facteurs de production étant de 2,3%. Source des données : USDA et FAO.

the rich endowment in fertile land and a low population density which until now have given a comparative advantage to extensive cultivation methods; (ii) the less than optimal efficiency of the National Agricultural Research System (NARS) in developing and disseminating appropriate technologies and (iii) the lack of access to credit for financing inputs and equipment. It is only in well-structured value chains (cotton, rubber, oil palm) that the use of inputs/technologies (and productivity) has been significant, with the leaders of the value chains (usually the agro-industrial companies) making these technologies available and correcting market failures (information, input distribution, credit).

61. The use of improved planting materials is high for cash crops and low for food crops.

In the cotton, rubber, oil palm and increasingly cocoa sectors, interprofessional bodies and private operators are very active in the production and distribution improved planting material through contractual arrangements. On the other hand, the use of improved seeds is still very low and increasing only slowly for most food crops, except for the irrigated rice sector where there exists licensed rice seed multipliers operating under the supervision of the *Office National de Développement de la Riziculture (ONDR)* and a seed information system operating through internet and mobile phones. Support for the development of the seed sector has been provided in recent years under, inter alia, a Japanese-PHRD grant (focusing on rice), the West African Seed Program (WASP) financed by USAID and the West Africa Agricultural Productivity Program (WAAPP) financed by IDA. The latter has supported (i) the production of improved planting material for rice, cassava, maize, yam and plantain; (ii) the establishment of “Innovation Platforms”²⁶ for their dissemination; and (iii) the overhaul of the national institutional framework: a National Seed Policy and a national legal and regulatory framework for the seed sector have been adopted both aligned on the common regional guidelines for seed production and control approved by ECOWAS/UEMOA (see below).

62. The use of inorganic fertilizer is still globally low at about 35 kg/ha on average

(against a world average of 140 kg). Fertilizer use is concentrated on cotton (40% of total consumption), cocoa and oil palm (16% each), sugar (10%), irrigated rice and bananas (5%). Fertilizer use is highest for industrial/export crops such as cotton, sugar and bananas, or for crops such as cocoa or rice for which fertilizers are subsidized. In 2015, about 350 000 tons of inorganic fertilizer were imported about 10 licensed importers, either ready or as components to be blended locally (about 20% of these importations are then re-exported to countries of the sub-region). It is estimated (2015) that less than 20% of all cultivated land received inorganic fertilizer, and about 18% of producers reported using them. This is similar to many African countries (Tanzania 17 percent of farmers use inorganic fertilizer, etc...), but much less than in Nigeria (41 percent),

²⁶ Innovation platforms (IPs) are dynamic spaces designed to facilitate, at local level, communication and collaboration amongst the value chain actors (producers, traders, transporters, researchers, extension agents...) to promote joint action to exchange knowledge and take action to solve a common problem.

Ethiopia (56 percent) and Malawi (77 percent). As for the other agricultural inputs, this relatively low use appears to be in line with the relative land/labor endowment of the country, with land per agricultural worker still relatively high in Cote d'Ivoire while Nigeria, Ethiopia and Malawi are more densely populated. Fertilizer use should thus gradually increase in the future, and it would be important to define a clear strategy for supporting their economically efficient and environmentally safe use, for example by undertaking systematic soil surveys to tailor fertilizer composition to specific soil fertility deficiencies.

63. **On the other hand, the use of agrochemicals (herbicides and/or pesticides) is relatively high in Cote d'Ivoire, reflecting both a significant pressure of pests and diseases and a relative shortage of labor.** It is estimated that about 20,000 tons of pesticides are used every year (14,000 tons official imports plus illegal imports). About 40% of producers report using them, which is substantially higher than in other African countries. Use of agrochemicals has nearly tripled since 1995. Insecticides account for the largest market share (50 % of total value). Herbicides (25 %) are used mainly in cotton and rice. They are predominately used in cotton and cocoa. Fungicides (6 %) play a leading role in banana and rubber plantations. Nematicides are almost exclusively used in banana and pineapple production. Growth regulators are also important in pineapple and rubber production. The agrochemical market is dominated by a small number of private firms, all subsidiaries of multinational corporations.

64. **Since 1989, the registration of pesticide products has been aligned on the international requirements.** Cote d'Ivoire has adopted a National Implementation Plan (NIP) for the *Stockholm Convention on Persistent Organic Pollutants (POPs)* and is a signatory of several other international conventions on the management of pesticides. Cote d'Ivoire has also aligned its national regulatory framework with ECOWAS' and UEMOA's regional regulations on pesticides approval, commercialization and control, and created its National Pesticides Management Committee. Most of the active ingredients that are particularly dangerous under conditions of use in developing countries (e.g. PIC listed chemicals) are banned or restricted. Distributors and professional applicators must be registered. However, the national capacity for the effective implementation of these regulations and for the necessary controls of product quality is not yet in place. Awareness regarding the likely consequences of indiscriminate pesticide use for natural resources is also low. The development and adoption of alternative strategies such as Integrated Pest Management (IPM) are still in their infancy.

CropLife-CI: Training cocoa farmers in IPM and the responsible use of pesticides

In 2011, CropLife Côte d'Ivoire and the German Technical Cooperation (GIZ) started to train cocoa farmers on Integrated Pest Management (IPM) and the responsible use of pesticides. The activities are part of the Cocoa Livelihoods Program that aims to improve the incomes of smallholder cocoa farmers in West Africa, ensuring the sustainability of their farms and livelihoods.

CropLife Côte d'Ivoire supports training for farmers and participating retailers on IPM and the responsible use of pesticides. Two Business Services Centers (BSCs) were opened in Daloa and Abengourou in November and December 2011. The BSCs provide useful information and training on good agricultural practices, crop protection technologies, market information systems, access to funding, post-harvest technologies and certification processes.

4.1.2 Technology generation and dissemination

65. **Increased investment to improve the efficiency of the national agricultural R&D and extension services could significantly enhance productivity, growth and income.** The overall return on public agricultural investment in Sub-Saharan Africa is estimated at around 35 percent. In addition, a recent study in Uganda and Tanzania demonstrated that an additional USD1.00 in agricultural R&D spending boosts agricultural output by as much as USD12.00²⁷. The efficiency and impact of the Ivorian national agricultural technology generation and dissemination system could be greatly improved through institutional reforms to make it more responsive to producers' needs and a much higher level of sustainable funding. The system was restructured at the end of the 1990s, based on an innovative public private partnership between the government and producer associations. Three inter-related institutions were created with Boards of Directors including a balanced representation of both producers (60% of seats) and the State (40%)²⁸ : the *Centre National de Recherche Agricole (CNRA)*; the *Agence Nationale d'Appui au Développement Rural (ANADER)*, in charge of extension; and the *Fonds Interprofessionnel pour la Recherche et le Conseil Agricole (FIRCA)*, responsible for funding research and extension programs from contributions collected from levies on the main export value chains (cocoa/coffee, rubber, oil palm, cotton and now cashew), funding more applied, on-demand research or advice programs, and/or government and donor contributions, funding in principle the long-term, strategic research and capacity-building activities. The FIRCA also plays a critical role for the funding of support for the "orphan crops" unable to contribute to the financing of these services (i.e. essentially food crops) which is cross subsidized by the levies collected on the main export value chains.

66. **Côte d'Ivoire's agricultural research capacity has increased significantly in recent years but overall research funding remains low.** Although agricultural R&D is acknowledged

²⁷ World Bank 2007. World Development Report 2008. Agriculture for Development.

²⁸ This proportion was adopted as representative of the relative weights of short/medium term and strategic activities and research programs.

by national policy-makers to be a major factor in agricultural development and poverty reduction, spending on agricultural research has been low. It has been relatively constant since 2000, at about CFAF 19 billion (in 2011 constant prices), which is less than half of Ghana ag. research spending. According to ISNAR, the agricultural research intensity in Cote d'Ivoire (total public spending on research as a percentage of AgGDP) has been consistently low, even by West African standards. In 2014 (last data available from ASTI) it was 0.53% (i.e. Cote d'Ivoire invested \$0.53 for every \$100 of agricultural output), about half of the target of 1 percent set by NEPAD, half the level achieved in neighboring countries (Burkina Faso, Ghana and Senegal), and less than a quarter of the intensity (2 percent) in countries like Botswana, Mauritius and South-Africa. It is important to note that, unlike the situation elsewhere in the region, the national budget and donors play a minimal role in financing agricultural R&D in Côte d'Ivoire which is largely funded by levies on the main cash crops value chains private sector through FIRCA (see above), which gives this funding a relative stability and predictability. The increase in agricultural research capacity, both in terms of numbers and qualification levels, was largely supported by the IDA-financed WAAPP (between 2012 and 2014 alone, the country added 43 PhD-qualified agricultural researchers to its workforce). In 2014, the 12 Ivorian agencies involved in agricultural R&D employed a total of 253 full-time equivalent (FTE) researchers. This, however, was much lower than Ghana (575) or even Burkina Faso (310). The efforts at developing human resources should thus be continued. Finally, as most NARSs in Sub-Saharan Africa, the Ivorian research system remains fragmented²⁹. This hinders the overall strategic and operational effectiveness of the system.

67. Fonds Interprofessionnel pour la Recherche et le Conseil Agricole (FIRCA). FIRCA was created in 2002 and has been a well-managed organization since its creation, responsive to its clients' needs and efficient in mobilizing and using the necessary resources (financial, technical) to address them. Its central objective is to finance adaptive research, extension and capacity-building activities, largely on-demand from producer associations, in all subsectors of agriculture, livestock fisheries and forestry. As mentioned above, its resources come from the contributions of agricultural value chains, government and donors, and its Board of Directors is dominated by producers (26 seats against 8 for the government) corresponding to their financial contribution to FIRCA's operations. Globally, FIRCA has been an efficient instrument for the development and dissemination of a large number of technologies and innovations, as demonstrated by the very positive assessment of its performance by value chains actors and donors. However, there is a need to correct some shortcomings, for example the quality sometime mediocre of the sub-projects selected for funding through its competitive fund (which calls for a clear strengthening of its Scientific Committee, responsible for the selection and quality control of the sub-projects); and

²⁹ In 2015, twelve agencies were involved in agricultural research in Côte d'Ivoire including : the Centre National de Recherche Agricole (CNRA) ; two other public agencies -- the Centre de Recherche oceanographique (CRO) and the Laboratoire national d'appui au développement agricole (LANADA); the national universities (in particular the Universités de Cocody, d'Abobo-Adjamé and the École Supérieure Agronomique (ESA) of Yamoussoukro ; and one private institution – the Ivorian Company of Tropical Technology (I2T) which conducts research on processing technologies for manioc, copra, coconuts, cassava, millet, sorghum, maize, coffee, and their by-products.

the insufficient control over the relevance and quality of the extension services/advice delivered by the selected industrial operators (see above), in particular in the cotton and rubber sector. There is also a need for preparing a medium-to-long term strategic plan for its future development, in terms of focus (more support to so far “orphan sub-sectors such as fisheries or forestry), the selection of service providers (with more diversification in terms of research, away from CNRA’s near-monopoly), and the mobilization of financial (enlargement of funding sources) to other value chains or other sources), and human resources (to efficiently meet and expanding and diversifying agenda/program).

68. **Centre National de Recherche Agricole (CNRA)**³⁰. CNRA is Cote d’Ivoire’s principal agricultural research agency, accounting for nearly half of total researchers and three-quarters of total research spending. It has successfully developed several new technologies for cocoa, rice in

Crop	Number of varieties, 2012–2014
Vegetables	3
Rice	2
Rubber tree	2
Coffee tree	1
Maize	1
Total	9

Source: ASTI 2017

collaboration with Africa-rice, maize, cassava, vegetables (eggplants, tomatoes, and chili peppers), rubber and coffee. However, its performance hasn’t been at the level that could be expected from a rather important research institute in an important African country, due to institutional constraints fully documented in a 2016 institutional and financial audit³¹. The audit highlights that, despite the management flexibility provided by

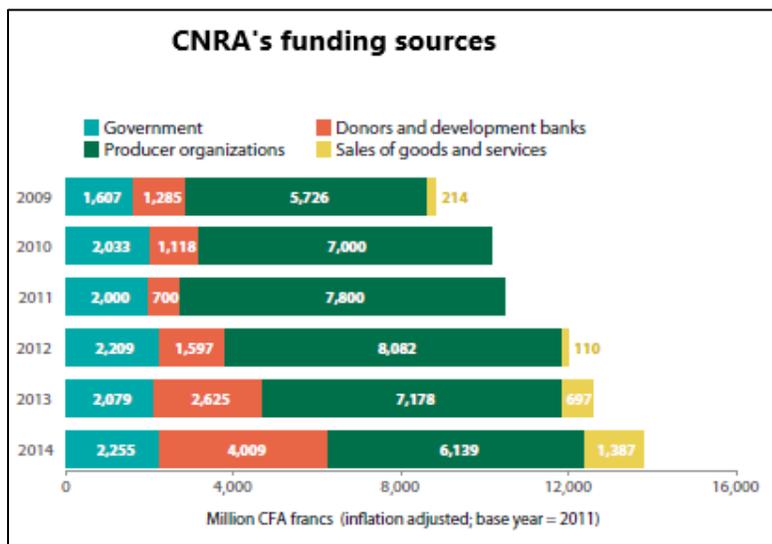
its statutes and the weight producers should in principle have in decision-making, CNRA management has been dominated by the Government with producers having little say in strategic decisions and oversight over the use of resources and results. The audit also indicates that CNRA’s internal management is overly bureaucratic and top-down, with little autonomy of regional directorates and research centers, which clearly impact negatively on operational flexibility and creativity. The Government never met its obligations, with annual budgetary allocations averaging about 15% of CNRA total funding needs (and used essentially for meeting the salary of researchers). Investments and research programs have largely been financed by CNRA-internally generated funds (10% of total funding in 2014), external sources (such as the WAAPP) and by the

³⁰ It was established in 1998 (under the Ministry of Higher Education and Scientific Research) as a public-private institution (*Société d’économie mixte*) through the consolidation of the Savanna Institute (IDESSA), the Forest Region Institute (IDEFOR), and the Ivorian Center of Technological Research (CIRT). CNRA is in principle 40 percent government owned and 60 percent privately owned (with the private sector, essentially producers, having 60% of the shares). CNRA’s mandate covers crop, livestock, forestry and postharvest research, as well as technology transfer and human resources development. Its research is conducted under 22 programs across five primary research streams: perennial crops, annual crops, animal production, production systems and technology

³¹ ABCD-AUDITEURS CONSEILS. 2016. Centre National de Recherche Agronomique (CNRA). Rapport de mission Audit Organisationnel et Financier.

contributions of producer associations through the FIRCA. CNRA-internally generated funds come from the sale of seeds/planting material and the production of its extensive plantations³².

69. **Government’s inability to meet its budget targets, combined with delayed disbursement of insufficient budgetary allocations, has had a significant negative impact on CNRA performance,** in particular with respect to its strategic research which requires long-term



funding. Also, the revenues internally generated by CNRA’s own production activities, combined with CNRA’s near-monopoly for FIRCA’s often unquestioning support to its research program, have promoted an inward-looking attitude and a certain lack of creativity among the center’s researchers by reducing the need to mobilize resources from clients and being accountable for their use. According to the recent institutional audit, the management

CNRA’s productive assets also diverts scientists from their core responsibility (research) toward purely commercial activities. Finally, the audit pointed out the lack of transparency, and a serious governance problem, in the management of the Institute and its resources.

70. **Agricultural extension. Agricultural extension is provided through two main systems: by the Agence Nationale d’Appui au Développement Rural (ANADER); and through the agro-industrial companies in the oil palm, rubber, cotton and sugar sectors.** ANADER³³ is relatively decentralized. In 2016, ANADER had a total staff 2300, of which 1570 technical staff (69%), field staff and specialists, and 730 support/management staff. The agency delivers its services through two main approaches: (i) the provision of rather “general” advice on a variety of subjects and crops (most food crops except rice), along the traditional public extension systems (“encadrement”), financed through government’s budgetary allocations; and (ii) more targeted on-

³² CNRA owns approximately 22,000 hectares of plantations.

³³ ANADER was created in 1993 by the consolidation of the previous public extension agencies (SATMACI, CIDV, SODEPALM). It was first established as a public/private entity (*société d’économie mixte*) with 90% of its capital held by the government. Following the reform of national agricultural services system at the end of the 1990s, its status was changed to that of *Société Anonyme*, with 35% participation from the State and 65% by the private sector, essentially producer associations. Its mandate covers both the provision of technical advice/dissemination of technologies technical for all sub-sectors, and the support to agricultural associations.

demand services through contracts with specific value chains such as services, services such as the contract with the Conseil du Café et du Cacao (CCC or cocoa exporters (Cargill) to provide technical support to cocoa cooperatives, the contract with the Conseil du coton et de l'Anacarde (CCA) for the provision of technical support to cashew producers or the contract with the Office National pour le Développement de la Riziculture (ONDR) for the provision of technical support to rice producers. ANADER has also participated in the competitive process organized by FIRCA for the provision of technical support to cotton producers, although this activity has now been totally transferred to cotton ginners. ANADER has been relatively flexible in the use of various instruments to meet its clients' needs and local environment, from farmer field schools to the promotion of Innovation Platforms. Because of the gradual reduction of public funding, ANADER currently mobilize about 55% of its total funding from contractual arrangements: in 2016, CFAF 5.7 billion from Government and CFAF 6.9 billion from contractual agreements, directly with value chain organizations (CCC, CCA, ONDR) or through FIRCA. Cotton ginning companies in the North, Palm oil and Rubber companies in the South are under contracts with FIRCA. Cocoa exporters also provide agricultural advice, as part of their certification programs, through outsourcing to third parties (example Cargill to ANADER), Agricultural advice -provided by agroindustrial companies through contracts with FIRCA have had mixed results, the companies being mostly interested in monitoring the use of fertilizer and agrichemicals and recovering credit rather than providing effective technical advice including on crops/activities other than the specific commodity within their value chain.

71. A well performing technology generation and dissemination system will be key to Cote d'Ivoire's future agricultural development. Given the important challenges ahead, such as rapid population growth, adaptation to climate change, increasing weather variability, water scarcity and the volatility of prices in global markets, investments in agricultural R&D will be an essential element in any successful agricultural and overall development strategy in Cote d'Ivoire. Currently, the Ivorian research and innovation system still doesn't appear ready to meet this challenge. Correcting the weaknesses of the national system, and specially of CNRA, should thus be a priority. An in-depth, uncompromising review of its national Agricultural R&D system, in all its components, along the lines of the review undertaken in 2006 by FARA³⁴, looking at its structure, governance, staffing needs, inclusiveness (Universities, NGOs, private sector), openness and regional and international collaboration, should thus be immediately undertaken to ensure (i) the alignment of its strategic planning and programs on national priorities; (ii) the coherence and coordination of its different constituents for the achievement of the country's central objectives; (iii) the necessary links of Ivorian research with regional and international research institutions; (iv) the maintenance of the necessary skills and human resources and (v) the sustainable and efficient funding of the new system. This audit should provide the basis for the finalization of CNRA's new strategic plan (2017-21) currently under preparation.

³⁴ Agricultural research delivery systems in Africa: an assessment of the requirements for efficient, effective and productive NARS. March 2006, FARA

4.2 Access to markets

4.2.1 The national road network

72. **Cote d’Ivoire has the most developed road network in West Africa.** Its road network totals 106 000 km of which about 100 000 km of rural/agricultural un-classified roads. The density of the classified roads is about 156 km/1000 km², which is high by African standard, and the classified network provides in principle sufficient coverage of primary and secondary cities and international borders.

Types de Routes	Linéaire en kilomètres
Routes revêtues interurbaines	6 360
Autoroutes	140 ⁽¹⁾
Routes en terre classées	75 500
Total réseau interurbain classé	82 000
Voies Express urbaines	50
Voiries urbaines	4 000
Total voiries urbaines	4 500
Pistes secondaires rurales	100 000
Total général	186 050
(1) Ce linéaire ne prend pas en compte l’Autoroute Singrobo – Yamoussoukro (en cours de construction)	

73. **However, the network has expanded very little since the late 1980s and has suffered from a continuous lack of maintenance over the last two decades which has resulted into increasingly deteriorating conditions.** The last inventory indicates that only about one-third of the main roads (*reseau primaire*) are in good condition, the balance being in poor or very poor condition. The state of the non-classified network is not known with any precision, but its deterioration is such that it constitutes, in particular in the forest zone, a major constraint for population access to market and services and a major impediment for the competitiveness of the agricultural sector. A number of other constraints added to the inefficiency of transport such as (i) the high number of road blocks and illegal payments collected by security forces³⁵; and (ii) a fragmented market for transport services dominated by informal and small players relying on over-aged vehicles, multiple local transport unions translating into “vested interest poles” and a system of freight repartition and “tour de role” pushing up freight prices. As a result, domestic transport costs in Côte d’Ivoire are among the highest in the world. Various trucking surveys report that the average freight transport cost is \$0.35 per ton km, much higher than in countries such as Vietnam

³⁵ A World Bank study in 2008 estimated that illegal payments represented from 15 à 35 FCFA/ton-km (i.e. an additional cost of about 20% of transport cost), the highest payments being on secondary roads. The total amount of this racket, essentially on the transport of agricultural goods, was estimated at about CFAF 25 billion/year. Controls also represented a considerable loss of time (one to two hours for a 500-km trip). Although illegal road blocks/payments have significantly decreased since 2012, they still represent a sizeable cost on the transport of goods and people.

and India. The highest costs are on secondary roads (\$0.47 per ton kilometer) and the lowest on the main roads (\$0.17 per ton kilometer).

74. **The rural road network (about 200,000 km) is critical for the collection of agricultural production and the distribution of inputs.** It is currently in very poor conditions, in particular in the Southern part of the country. The cost of the rehabilitation/maintenance of the entire rural road network (200 000 km over a 10-year period) would cost about CFAF 6,000 billion (US\$12 billion or US\$ 120 million/year). To mobilize the necessary funding will require much more resources than the Road Fund can provide, such as a major increase in budgetary allocations and/or the mobilization of concerned private operators under public-private partnerships. Under the IDA-financed Agricultural Sector Support Project, the government has since 2014 piloted an innovative approach for the maintenance of rural roads, based on a public-private partnership between the government and the four main Interprofessional bodies (cocoa, rubber, oil palm and cotton)³⁶. This approach takes into account (i) the decentralization policy of the country, with the gradual transfer of the non-national roads to local governments (Conseils Régionaux/Rural Communes); and (ii) the need to mobilize the private actors in the planning and financing of the maintenance of the rural road network, in particular at the most decentralized level, linking production zones to the classified network.

75. **Good rural infrastructure (road networks, storage facilities, electricity and telecommunications and information services) are essential to the efficiency of the agriculture sector.** Strong rural infrastructure can reduce transportation costs, increase competition, reduce local and seasonal price differentials, improve farmers' incomes, and expand private investment opportunities which in turn supports the creation of a significant number of jobs. An adequate transport infrastructure is possibly the most important driver of agricultural development, as well as a major factor in the growth of secondary cities, critical to the development of a thriving rural economy. However, Côte d'Ivoire's rural infrastructure is currently inadequate, especially its road network which has become severely dilapidated. The rehabilitation and expansion of rural infrastructure, and of the rural roads in particular, should therefore be one of the highest priorities. Côte d'Ivoire's transport infrastructure requires a major rehabilitation if the country is to achieve its ambition of becoming an emerging country and a hub for international trade and inland transport in West Africa. In addition, major policy measures should be taken to improve transport services such as: (i) the modernization of the vehicle fleet; (ii) the reduction/elimination of informal payments and roadblocks; (iii) measures to improve the **efficiency** of transport services and their cost; and (iv) the establishment of an efficient transport information system.

³⁶ Confronted with Government failure to maintain the rural road network, these Interprofessional bodies have been regularly financing limited and targeted annual maintenance programs to fix the most urgent repairs on priority tracks for the collection of their members' production through a general levy on export.

4.2.2. Ports

76. **Cote d'Ivoire has two world-class ports in Abidjan and San Pedro.** The Autonomous Port of Abidjan (with one container terminal and another under construction) and the deep-sea port of San Pédro in the Western region of the country provides maritime transport for Côte d'Ivoire and landlocked countries such as Burkina Faso, Mali, and Niger. Abidjan's port is the country's main port, accommodating 90 percent of maritime traffic in the country. It handles larger freight volumes than most ports in West Africa and has a capacity of around 650,000 twenty-foot equivalent units (TEUs) per year. San Pédro port is mainly dedicated to the export of timber and agricultural products (primarily coffee and cocoa). These ports' activities were seriously disrupted by the sociopolitical crises of the 2000s but have been growing strongly after 2011. The port of Abidjan is regaining its place among the busiest ports in Africa. The activities of the Port of San Pédro have also witnessed a strong recovery over the past few years.

77. **Ivorian ports are however among the most expensive in West Africa.** This is mainly due to a bad accessibility, limited physical infrastructure (including the infrastructure -- *quai fruitier* -- dedicated to fresh produce such as mangoes, pineapple and bananas), limited competition among port operators/services and lengthy, cumbersome and expensive custom procedures. New infrastructure is being built, in particular in Abidjan (expansion of the port to Boulay Island, dredging and increasing port depth to make it a deep-water port, construction of a bridge between the port of Abidjan and the northern highway to facilitate access by bypassing the city of Abidjan).

78. Measures should also be taken to improve the efficiency and reduce the cost of port operations, by promoting competition among port services operators and streamlining the custom clearance process.

4.2.3 Secondary urban centers

78. **Secondary towns can play a major role in the economic transformation of the country**³⁷. Secondary towns act as centers of bulking/distribution of agriculture products and as suppliers of services to agricultural producers. They help rationalize activities along the value chains by strengthening connections between their different segments—such as production, storage, processing and packaging, transport, and marketing. Their development stimulates local economic activity and provide significant employment opportunities for rural people.

³⁷ To efficiently support agricultural development, a rational distribution of roles must be established among various levels of urban centers, based on relative comparative advantage, with small cities servicing rural areas facilitating the bulking of produce, secondary cities being centers of scale economies and clusters of complementary firms and an efficient location for the first processing of bulky commodities, and large cities hosting the final processing of consumer goods, connecting value chains with the national regional and international market.

79. **As Côte d’Ivoire moves toward middle-income status, its medium-size cities will need to play a much larger role in sustaining the growth of its agro-based economic activities.** Government’s new territorial development policy aims at making these secondary towns dynamic centers for the agglomeration and scale economies needed to unleash the agricultural potential of the different regions of the country. The main operational instruments of this policy are the design of specific regional development plans and the establishment of industrial zones (*zones économiques intégrées*) in the main regional cities, with secured access to land and the provision of all necessary utilities, to attract the private agro-industrial firms that can anchor regional agricultural value chains. This strategy is supported by the World Bank through its urban development projects and two agricultural enclave projects (cashew and cocoa).

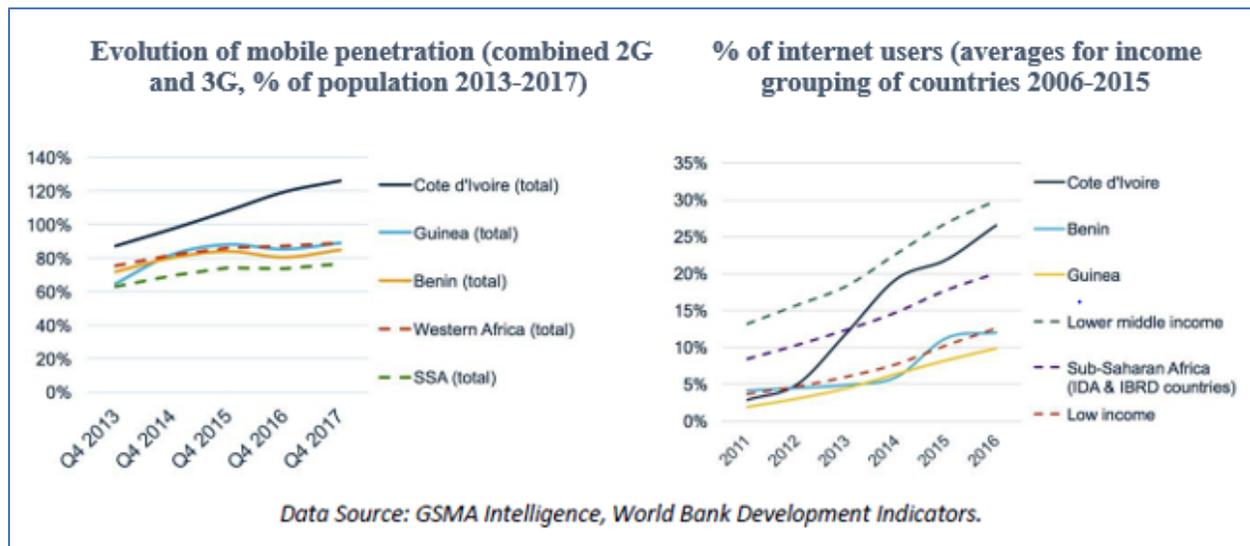
4.2.4 ICT connectivity and information systems

75. **The agricultural sector, which is facing specific delivery challenges, information asymmetries or information/market failures, can greatly benefit from the development of ITC services.** Several innovations such as e-information on markets and technologies or mobile financial services can increase farmers productivity and market power. The Ivorian ICT environment has drastically improved during the last five years. In 2012, Côte d’Ivoire ranked as one of the worst countries in the world regarding ICT Environment (130th out of 142 countries), but in less than 5 years, the country has risen at the 72nd place. This major improvement is largely explained by the revamping of the telecom law in 2012, which has increased competition among the main mobile operators (Orange, MTN, and Moov) for the expansion of their coverage and the provision of services. The mobile connection penetration (number of total SIM divided by total population) reached 126% at the end of 2017, compared to 89% for the West Africa region and 77% for Sub-Saharan Africa. In Abidjan, most citizens now have access to a 3G/4G mobile telephone network and access to the internet is relatively good, although connectivity charges remain high compared with countries like Ghana, South Africa³⁸.

76. **Despite a robust development, ICT services have so far mostly benefited the urban population.** An important share of the poorer households, in particular in rural areas, does not have adequate connectivity. Uncovered localities represent 23% of the total population while mobile operators have confirmed that they have reached their profitability frontier and that extending their coverage would not be sufficiently profitable due to: (i) the lower population density in rural areas; and (ii) the lower purchasing power of subscribers. To address this market failure, the government is currently deploying a national 7,000 km long fiber backbone to cover rural areas and elaborating a “white zone” program to increase rural coverage. The latter will also

³⁸ Three major fiber optic cables land in Abidjan: the West African Cable System (WACS), the ACE (African Coast to Europe) and the SAT3/WASC (South Atlantic 3/West Africa Submarine Cable).

be improved by the recently approved E-Agriculture Project (US\$ 70.0 million) that will support (i) the extension of digital connectivity in targeted remote areas to increase in the number of individuals and businesses that can access both mobile services (voice and SMS) and internet; and (ii) the development of digital services for agricultural supply chains by setting up electronic platforms (e-agriculture) able to deliver market information and advice on good agricultural practices and climate-smart agriculture



77. **The development of ICT and e-agriculture systems will permit the development of information systems.** Currently, the country has several public agricultural information systems (MINAGRI, CNRA, ANADER, Agrometeorological Observatory) as well as Market Information Systems (SIMA) such as those operated by OCPV for food crops and the information system dedicated to the cashew value chain. Most of these systems (except that for the cashew sector, established with the support of RONGEAD), supply useful statistics but provide information with lengthy delays that make them largely useless for private operators. The development of ICT and e-agriculture systems will benefit rural producer organizations or private providers through the provision of real-time information on commodity prices and market opportunities. Such systems, along the line of the cashew-specific information system should be initiated for the major agricultural value chains.

4.2.5. Food safety, quality and sustainability issues

78. **Quality issues are increasingly important for Ivorian agriculture.** With mounting concerns about the impact of agrochemical residues and toxins (such as *ochratoxin* in coffee and cocoa) on human health and the transmission of certain animal diseases to human (BSE, Avian Flu, Ebola), far more stringent sanitary measures are being adopted by many industrialized and developing countries. As a result, Ivorian exports are subjected to increasingly binding public food safety standards (SPS). In addition, the trade of critical commodities (such as cocoa or palm oil) is now subject to various private standards focusing not only quality but also on social and

environmental issues. Compliance with these public and private standards is critical for ensuring access to markets and also the price fetched by products.

Food safety

79. **Cote d'Ivoire will encounter more stringent regulations in relation to food safety as well as plant and animal health.** The country seeks to expand and diversify its food and agricultural exports to neighboring markets. While food safety issues have in the past focused nearly exclusively on exports to international markets, food safety is also emerging as an important public health issue in countries in West Africa. Both UEMOA and ECOWAS have made food safety a priority³⁹ and most countries in the region have enacted regulations to ensure the food safety of their populations. A comprehensive *National Strategy and an Action Plan for Food Security* was prepared in 2010 by the Ministry of Health with the assistance of FAO and WHO, but it has not received any attention from the Government⁴⁰. In 2014, the Government (Ministry of Agriculture) requested the assistance of the World Bank for making a new diagnostic of the situation with respect to food safety and propose a new Food Safety Strategy, including an update/upgrade of the legal and regulatory framework, strengthening infrastructure, processes and human resources, and establishing a coherent institutional mechanism for coordination and supervision. The initiative didn't get any follow up. In June 2016 however, the government created a new National Agency for Food Safety and requested AFD assistance (under C2D) for the implementation of the *Projet d'Appui à l'élaboration d'un Système National de Contrôle de la Sécurité Sanitaire des Aliments (FADCI-SSA)*. The project will make a full diagnostic of the current system, update the legal, regulatory framework, streamline the institutional arrangements and assess the required physical, human and financial resources for implementing the new national system. It will also provide assistance to the private actors of three agricultural value chains (pork, poultry, and maize) for adopting good agricultural and food safety practices.

80. **Actions are now needed to implement the national food safety system.** There have been in the past many reviews of the Ivorian national food safety system (*Système National de Contrôle des Aliments - SNCA*) that have made specific recommendations for its improvement⁴¹. These reviews have clearly indicated that: (i) the national system was complex and uncoordinated, with many institutions involved, with both gaps and overlaps in responsibilities; (ii) the current legal

³⁹ Règlement n°01/2005/CM/UEMOA of July 5, 2005 « portant Schéma d'harmonisation des activités d'accréditation, de certification, de normalisation, et de métrologie dans l'UEMOA » and also establishing the Système Ouest Africain d'Accréditation (SOAC) in charge of awarding accréditation to laboratories and services in charge of certification and inspection on the basis of recognized standards (ISO/CEI 17011).

⁴⁰ In 2014, the Government (Ministry of Agriculture) requested the assistance of the World Bank for making a new diagnostic of the situation with respect to food safety and propose a new Food Safety Strategy, including an update/upgrade of the legal and regulatory framework, strengthening infrastructure, processes and human resources, and establishing a coherent institutional mechanism for coordination and supervision

⁴¹ Supported by many donors (UE, UEMOA, AFD, FAO/WHO, World Bank. Worth mentioning is the support given by FAO/WHO which resulted in the preparation of two key documents: (i) Stratégie nationale de SSA (2009-2013); and(ii) Plan d'action national de SSA (2010)

and regulatory framework was obsolete, very bureaucratic and unable to answer the fast changing national and international environment/requirements in terms of food safety issues and standards; (iii) there was a critical lack of equipment and trained personnel in the public sector for carrying out the necessary controls, as well as serious governance problems that largely negated any regulatory and technical advances that may be made otherwise; (iv) there was a lack of laboratories with the necessary accreditation ; and finally (v) there was also a lack of collaboration between the public and the private sectors for the exchange of information and an inefficient allocation of responsibilities among actors.

Quality and sustainability standards.

81. **In Cote d'Ivoire, the adoption of good practices has so far been slow.** As mentioned above, consumer markets have also considerably increased their pressure for adopting sustainable production systems. meeting not only good agricultural practices but also strict social and environmental standards. However, the adoption of good practices has so far been slow (e.g. poor post-harvest practices, high moisture content in cocoa beans, foreign elements in cotton fiber and bags of cashew nuts), except for a limited number of large private producers of fruits targeting export markets. Quality management involves a complex set of sometime sophisticated technical (IPM) and management activities requiring a broad range of skills and technologies difficult to access by small producers. In the future however, it will be important to provide effective assistance to producers for adopting approaches such as HACCP to achieve the required quality and obtain the certification needed by a growing number of overseas markets (EUREPGAP, GLOBALGAP, Tesco, etc.). In value chains with many small producers and lacking the necessary coordination, the joint action of the State and private value chain leaders will be necessary to set up and manage such an approach. In Cote d'Ivoire, private standards concerns have so far focused largely on two crops: cocoa and oil palm:

82. **The oil palm sector has generated serious concerns about its environmental impact** (deforestation, emission of greenhouse gases, contamination of underground water by fertilizers and pesticides use). These issues gained attention in Southeast Asia where very large industrial plantations have been expanding very fast but have also impacted on West and Central African countries such as Gabon, Cameroon and Cote d'Ivoire. As a result, the main industrial estates in Cote d'Ivoire have adopted their own code of conduct with respect to environmental and social issues (including providing schools and health clinics) and AIPH, the sector's Interprofessional body, has adopted sector-wide guidelines to be monitored and enforced, including for small and medium-term plantations. Cote d'Ivoire has also recently (2015) approved the national

interpretation of the *Round Table on Sustainable Palm Oil (RSPO)* for dealing with all environmental and social concerns⁴²⁴³.

83. **The cocoa sector has been the subject of mounting pressures from civil societies in consumer countries, both for its negative environmental impact on deforestation and its use of child labor** (cocoa-induced deforestation is discussed in a separate section below). Child labor in cocoa plantations has been the subject of increasing international concerns. Since the end of the mid-1990s. Following the adoption of the ILO Convention “*Concerning the Prohibition and*

International Cocoa Initiative (ICI)

The ICI was founded in response to the Harkin-Engel protocol, to support the elimination of the Worst Forms of Child Labor (WFCL), child labor and Forced Adult Labor (FAL). The main thrust of their action has been targeting the entire cocoa sector in Côte d’Ivoire and Ghana, working with private cocoa companies and local authorities to jointly tackle the child labor issues within the supply chains through community-level sensitization, mobilization and community-driven action.

Immediate Action for the Elimination of the Worst Forms of Child Labor” in June 1999, a Protocol, known as the *Harkin-Engel Protocol*, was signed by the Chocolate Manufacturers Association and the World Cocoa Foundation in September 2001 in Washington to end the worst forms of child labor in cocoa plantations. The Protocol sets an objective of reducing the WFCL by 70% by 2005⁴⁴. Signatories included all major

industry groups, the United States, Ghana and Côte d’Ivoire governments and activist groups. The International Cocoa Initiative (ICI) was established in 2002 by the World Cocoa Foundation (WCF), with representatives of the global chocolate industries and concerned child labor organizations, to operationalize the H-R Protocol and bring good working practices to the cocoa industry.

4.3. Sustainable management of the natural resource base

84. **Until today, the country’s agricultural development, has been based on extensive methods which have resulted in a severe degradation of its rich natural resources.** One critical challenge Cote d’Ivoire will have to face in the future will be to maintain a strong agricultural economic growth while preventing the irreversible depletion of its natural capital. The Country Environmental Assessment prepared by the WBG in 2010 identified an extensive list of environmental issues including, among the most serious, the rapid loss of forest cover and biodiversity, extensive land/soil fertility degradation, coastal erosion, air & water pollution and urban environment degradation.

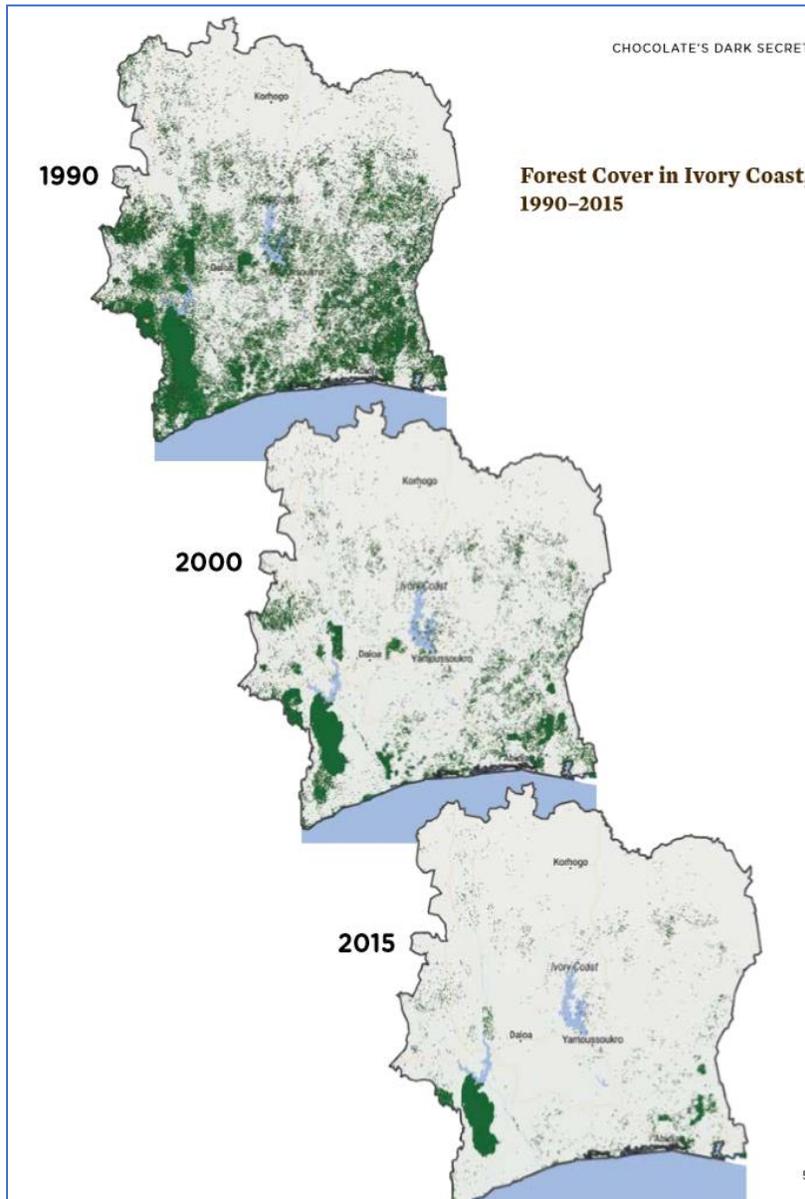
⁴² The WBG has issued in 2015 a Country Situation Analysis (CSA) for the oil palm sector in Cote d’Ivoire.

⁴³ An interesting model would be that developed by OLAM and the Government of Gabon, based inter alia on precise zoning, which has received high praise from the industry and National Geographic and is attracting interest from major producing countries such as Malaysia.

⁴⁴ The 2001 *Harkin Engel Protocol* (commitment to end child labor in cocoa by 2005) was followed by the 2010 *Framework of Action to Support Implementation of the Harkin-Engel Protocol* (the worst forms of child labor in the cocoa sectors of Côte d’Ivoire and Ghana to be reduced by 70 percent by 2020).

4.3.1. Impact of agriculture development

85. **The rapid agricultural expansion has indeed occurred, in particular in the Southern region, at the expense of the country's natural forests.** The spectacular growth of Ivorian agriculture, favored by very permissive national policies and a very high population growth, has



been at the heart of the "Ivorian miracle." It also has been the driver of the massive deforestation experienced by the country, including *gazetted forests* and protected areas. Cultivated land increased from 6.0 million hectares in 1970 to over 17.0 million hectares in 2016 (including fallow land, as already mentioned). Symmetrically, the area under forest fell from 16 million hectares in 1900 to 10 million ha in 1969 and around 5.0 million ha at the beginning of the 2000s. Deforestation accelerated further during the civil strife of the 2000s. Today, according to a recent survey, the total forested area is estimated at 3,4 million, of which not more than 2.0 million hectares of dense forests. The forest area has thus declined thus by close to 80% in the last 50 years, with a deforestation rate estimated at close to 200,000 ha/year during the period, one of the highest rates in the world. This

deforestation has been particularly intense in the Southern part of the country where two levers fueled the agricultural colonization of forest areas: (i) the greater profitability of crops grown on forest land, in particular cocoa, taking advantage of the "forest rent" due to the natural soil fertility and a lower pest pressure; and (ii) the race for land appropriation through the establishment of agricultural holdings. SODEFOR estimates that the rate of agricultural encroachment in the country's 234 gazetted forests increased from 25% in 1996 to about 60% in 2016. while the OIPR

estimates that the 8 Parks and Reserves of Côte d'Ivoire, although better protected, have seen an average degradation rate of around 20%⁴⁵. According to various sources – including government officials – up to 40% of Ivorian total cocoa crop (i.e. about 800 000 tons/year) comes from plantations established (illegally) inside classified forests or protected areas. This represents more than 1.5 million ha and possibly up to 500 000 households (3.0 million people) living in these protected areas, with many villages, clinics, school existing in these protected areas. The speed of this encroachment is illustrated by the satellite images from gazetted forests in 1990, 2000 and 2015 (picture) during the 25-year period.

86. The sustainable management of the country's remaining forest resources will be one of the greatest challenges in the future. The core issue will be the definition and implementation of a strategy for “zero-deforestation agriculture” in a context of rural population growth and an increasing pressure on land. The destruction and degradation of the remaining forests would continue to fuel the already evident climate that is affecting the country and its negative impact on agriculture. It is thus critical to ensure that future agricultural development will be compatible with the conservation of the remaining forests, based on Climate Smart Agriculture and an intensification of farming practices able to provide farmers with an adequate income on limited farm areas. This intensification will however require major changes in agricultural policies (taxation, access to inputs and finance) to increase the productivity, incomes and capacity of farmers make the necessary investments on their farms.

87. Actions at farm level, although necessary, will not be sufficient to achieve a “zero deforestation” agriculture and build climate resilience. Determined political commitment and action will be needed in several areas critical to the development of more intensive agriculture and the conservation of the country's natural resource base. This include : (i) an end to government's long-standing laissez-faire/open access policy concerning protected forests/areas; (ii) a total overhaul of fiscal policies in the forestry sector (in particular in the rural domain), to encourage tree plantations; (iii) an increase in farmers' land tenure security, including harmonizing the so far disjointed land and tree tenure security systems, to provide the necessary incentives for investing in productivity-improving technologies as well as for conserving naturally occurring trees⁴⁶; and (iv) a determined support for the diversification of rural activities out of agriculture to relieve the

⁴⁵ This degradation varies widely depending on the particular parks and reserves: e.g., 1% for the two main National Parks of Tai and Comoe, but 60% for Marahoué and Mount Peko.

⁴⁶ The land law recognizes rights to the land and the resources upon it, including trees. However, the government continues to issue logging licenses within the rural domain which is a source of conflicts and resentment for the rural populations. The new Code Forestier (Loi du 14 juillet 2014) doesn't clear all ambiguities concerning the rights of local populations (communities, individuals) to use the forests upon their land (whether their customary rights are recognized or benefitting from a certificat foncier ou a titre foncier) as they see fit, to be sold for logging or cleared for agricultural use. It is thus urgent to clarify these aspects of the new forestry code and ensure that the appropriate dispositions are taken to preserve the rights of the local population, for example by requiring their prior consent and an adequate compensation for accessing the forestry resources upon their land.

pressure on natural resources. The government has recently adopted a new Forest Code (April 2019) and a new Strategy for the preservation and restoration of the national forests. It has also launched a major program in partnership with the main private companies of the cocoa global value chain to put an end to cocoa-induced deforestation (the “Joint Framework For Action” signed jointly by the Government and the World Cocoa Foundation under the Cocoa-Forest Initiative, see below).

4.3.2. Land use

88. **Land has always been central to almost every dimension of Côte d’Ivoire's economic and social life.** The country is endowed with important cultivable lands, representing about 72% of its total area (23 million ha out of 32 million). As already mentioned, cultivated areas have increased rapidly since the country independence, from 3.0 million ha in 1960 to about 17.0 million ha currently (including fallows, i.e. 70% of total cultivable area), an average annual growth rate of close to 3%. This growth, fueled by a high population growth rate and immigration from neighboring countries, has been particularly strong in the forested South, for the development of cash crops and the production of food crops for a growing urban population. Today, the average density of population is not particularly high at about 35 hab/km², although there is a high variation among different areas, with densities approaching or exceeding 100 rural hab/km² in the South, and very low in some regions such as Denguélé (10 hab/km²).

89. **Today, although cultivable land is still globally available for agricultural development, access to land is increasingly difficult,** particularly in the southern and western parts of the country. Easy and peaceful access to land in the sparsely populated Southern part of the country, by Ivorian and non-Ivorian migrants, was the basis of the Ivorian miracle in the 1960s and 70s. As land was abundant, coffee and cocoa plantations could develop and became the mainstay of economic growth until the 1990s. Migrants negotiated land access directly with the local communities within a framework of a customary system of compensations that allowed to maintain a structured system of social and economic relationships. These arrangements began to be questioned in the 1980s with an increasing pressure on land. Land arrangements between local people and migrants (nationals or foreigners) came under scrutiny for various reasons: (i) the economic success of the migrants due to the profitability of the plantations caused a degree of resentment amongst local communities; and (ii) young people returning home from the cities where they had failed to find jobs came into competition with migrants and disputed the land transactions made by their relatives in their absence. Conflicts over access to land started to escalate at the beginning of the 1990s, exacerbated by political debates promoting Ivorian nationality (“Ivoirité”), prompting the government to address land access/ownership issues through the 1998 Rural Land Law which not only set Ivorian nationality as a condition for land ownership but had a strong bias in favor of “autochthony” (local origin). Mounting tension about land ownership were a major factor in the civil war of the 2000s. Today, access to and use of land remain a major social and economic issue, with a still growing rural population (which is not

expected to stop until 2050) and a lack of sufficient economic and employment opportunities in urban areas.

90. **In the mid-1990s, recognizing the need to reduce land conflicts and provide incentives for more intensive agricultural practices, the Government started to pilot a new approach to the management of rural land (the “Plan Foncier Rural”).** This plan provided the basis for the approval of a new Rural Land Law in December 1998. The new law aimed at transforming customary land rights into formally recognized ownership rights across the entire rural domain. Implementation of the Rural Land Law has been slow. At the promulgation of the law, only less than 2% of rural land had formal ownership titles, the remaining land being managed under sometimes unclear and contentious customary arrangements in a context of rapid monetization of land and loss of respect for traditional customary rules. Today, 20 years after the adoption of the law, only about 4,000 land certificates (the first step to get full ownership) have been issued out of an estimated 1.5 million agricultural farms (0.34%). Furthermore, there have been only 134 cases of certificates being transformed into full title. Besides the 10 years of civil war during which field work was not possible, progress was also impaired by titling very cumbersome and costly titling processes. including: (i) 20 different steps and multiple poorly coordinated institutions; (ii) costly site visits by a limited number of certified private surveyors (*géomètre agréé*) and local officials responsible for confirming the plots right holders (*commissaire-enquêteur*); and (iii) the validation of the certificates by a local Rural Land Tenure Committee (*Commissions de Gestion Foncière Rurale – CGFR*)⁴⁷. The average cost of a certificate for a plot is around \$421 when done as part of a collective process on behalf of a large number of rights holders (*certification “en nappe”*) and \$1,370 for a specific individual plot, well above what most agricultural producers can pay.

91. **Since 2013, the Government has made of the effective implementation of the Rural Land Law a priority of its strategy for making Cote d’Ivoire an « emerging country ».** While opposed to a change in the law, as the revival of debates on rural land might put indefinitely off the start of any land tenure program, the government has initiated the revision of the regulatory framework to reduce the complexity and cost of land registration procedures⁴⁸. Limited pilot operations have also been launched with donor financing (EU, AFD and IDA through the Post-Conflict Project (PAPC). Finally, the Government has established in 2016 a Rural Land Agency (*Agence Foncière Rurale – AFOR*) that will be responsible, under the oversight of MINADER, for the implementation of the rural land registration process under the National Rural Land Tenure Security Program (*Programme National de Sécurisation du Foncier Rural – PNSFR*). AFOR management team has been appointed in August 2017, and a Steering Committee (*Conseil de Surveillance*), including representatives from the Prime Minister’s office and the various ministries involved, was established in September 2017. Government has also provided the financing for AFOR’s internal operations. Under the PNSFR, the Government intends to (i) demarcate the

⁴⁷As a result, Côte d’Ivoire has one of the most lengthy and costly land certification processes in Africa.

⁴⁸A Working Group was established to update the regulatory framework and drastically simplify and reduce the costs of land registration. The Bank has provided technical assistance in this area through the *Support to Côte d’Ivoire Land Policy Technical Assistance (P148791*

boundaries of all of the country's villages; and (ii) issue certificates for the plots over half of the country's agricultural land (about 12.0 million ha) as the basis for the delivery of final titles and of long-term leases⁴⁹. The cost of the program is estimated at about CFAF 100 billion/US\$200 million, to be mobilized, in large part from donors, and its implementation will require both a further simplification/adaptation of procedures and a large quantity of adequately trained human resources. Support to the program is being provided by IDA under the newly approved Land Policy Implementation and Improvement Project (US\$50 million), including: (i) further reforms to the legal (to extend the legal duration of land certificates from three to ten years, as called for in the Land Policy) and the regulatory framework; (ii) support to AFOR to develop its operational procedures and participatory processes involving local community members as para-surveyors and archivists; (iii) the establishment of an accurate geodetic network and an efficient land information system (including decentralized land registries at departmental level to register the rights of all land users); and (iv) training programs to produce qualified land administration staff for both the public and private sector need to be designed and implemented.

4.3.3. Government policies and programs for the management of natural resources

92. **Cote d'Ivoire has ratified many international conventions/protocols concerning sustainable development and environmental management.** This includes the *United Nations Framework Convention on Climate Change (UNFCCC)* in 1994 and the *Paris Accord on climate change* in 2015. As reflected in its 2016-20 National Development Plan (NDP), the Ivorian government is committed to promote an inclusive and sustainable economic and social development. The NDP provides a coherent overall framework for the various sectoral policies/strategies -- such as the *National Strategy for Climate Change*, developed for the period 2015-2020, the *Rural Land Policy Declaration* (2016) and the new "*Code Forestier*" and the "*Strategie Nationale de Preservation, Restoration et Extension des forêts*" in 2019. Government commitment is also highlighted by the country's endorsement of the *New York Declaration on Forests*, which aims to eliminate deforestation by adopting "zero-deforestation farming systems"⁵⁰, and its adhesion to the international *REDD+* and the *Forest Law Governance and Trade (FLEGT)* programs, launched in 2011 which aim to ensure transparent and sustainable forest management.

93. **Existing regulatory texts as well as the institutional framework need to be revisited.** The implementation of Government's policies/strategies is framed by a comprehensive body of legislative and regulatory texts, old and new⁵¹, which would benefit from an in-depth overhaul and

⁴⁹ This would represent the delimitation of about 8,500 villages and the delivery of 500,000 certificates,

⁵⁰ In his speech to the United Nations at the September 23, 2014 Climate Summit in New York, the Ivorian President placed a particular focus on the cocoa industry and to the restoration of a forest cover of 20% of the national territory.

⁵¹ Among which Law No. 96-766 on the Environment Code was promulgated on October 3, 1996, and on the regulatory level, Decree No. 96-894 of November 8, 1996, determines the rules and procedures applicable to studies on the environmental impact of development projects. Other relevant laws reinforce this body of law, namely: Law No. 98-755 of December 23, 1998, on the Water Code; Law No. 2002-102 of February 11, 2002, on the establishment,

harmonization. Similarly, the current institutional framework for implementation is complex, fragmented among many ministries and related institutions, and the lack of an effective coordination mechanism has greatly limited the effectiveness of government action. The government has initiated, but not yet completed, the review of the country's legal and regulatory framework (the recent amendments to the 1998 Rural Land Code, the 2019 Forestry Code...). This overhaul should be rapidly completed. Although this is necessary, it will however not be sufficient as the main challenge will remain the effective implementation of any new and coherent policy, legal and regulatory framework (also by long-standing cultural/customary practices, over which Government has only a limited degree of influence) if the lack of adequate human and financial resources and the poor governance in critical institutions are not corrected.

94. **Major programs and initiatives are under way.** The Government has launched major programs aiming at the more sustainable management of the country's natural resource base, among which:

- **Forestry and REDD+.** Côte d'Ivoire is a member of two international REDD+ support platforms: the UN-REDD Program (an FAO/UNDP/UNEP partnership) and the FCPF (World Bank). These programs support the sustainable management of forests and provide incentives to combat the main drivers of deforestation and forest degradation, such as slash-and-burn agriculture (shifting cultivation), unsustainable logging and fuel-wood production. Since 2013, Côte d'Ivoire REDD+ program has been receiving assistance from AFD, the European Union (EU REDD), the ADB and IDA. IDA support includes (a) a grant of US\$ 8 million under the FCPF to: (i) prepare a national REDD+ strategy and policy framework, (ii) establish a reference baseline of emissions from deforestation and forest degradation; and (iii) set up a national monitoring, reporting and verification (MRV) system for emissions reduction; and (b) a credit of US\$ 24 million from the FIP trust fund in support of a Forest Investment Project representing the first phase of government's Forest Investment Plan (US\$80 million) which also includes a second 5-year phase of US\$56 million to be raised by the Government to consolidate and expand the first phase interventions.
- **Land tenure management.** Several operations are currently on-going, financed by AFD, EU and IDA to support the implementation of the Rural Land Law/framework, including the recently approved Land Policy Improvement and Implementation Project (US\$ 50 million) financed by IDA, aiming at building the capacities and institutions necessary to support implementation of the national rural land tenure security program and to register customary land rights in selected rural areas.

management, and financing of national parks and nature reserves; Law No. 2014-138 of March 24, 2014, on the Mining Code; Law No. 2014- 427 of July 14, 2014, on the Forest Code; Law No. 98-750 of December 23, 1998, amended by the law of August 14, 2004, on Rural Land.

95. **In addition, many private and non-governmental actors are involved in the challenges of promoting sustainable farming systems.**

- **In the oil palm and rubber sectors**, the main industrial estates have adopted codes of conduct with respect to environmental and social issues. AIPH, the oil palm Inter-professional body, has also adopted sector-wide guidelines that will be monitored and enforced, including for small and medium-term plantations. The first step in this initiative has been the adoption of the *national interpretation of RSOP guidelines* which provides a common framework for the certification of individual plantations and processing units. APROMAC, the rubber Interprofessional body, and the industrial rubber companies have adopted a common environmental and social code of conduct. Oil palm and Rubber Inter-professional bodies and companies have also set-up systems for the geo-referencing of plantations, including smallholders', to ensure that new plantings will be done outside protected and/or fragile areas.
- **In the cocoa sector**, the government and the main exporters have taken action to ensure that at least 50% of cocoa production will be certified as sustainable cocoa (from an environmental and social point of view, including child labor) by 2020. Certification programs are implemented by all major cocoa exporters (UTZ certified, Rainforest Alliance, and Fairtrade are the most common labels in Côte d'Ivoire) which include productivity/quality packages, access to financial services, support to producer's organizations as well as prevention of child labor. In addition, the World Cocoa Foundation (WCF)⁵² has spear-headed several important initiatives in Cote d'Ivoire under its *Cocoa Action* strategy which aims at aligning/focusing the strategies of the world's leading cocoa and chocolate companies, Governments of the main producing countries (in particular Cote d'Ivoire and Ghana) on key issues in cocoa sustainability. In 2012, the WCF launched the African Cocoa Initiative (WCF/ACI) a 5-year program to pilot effective public and private sector approaches in Côte d'Ivoire, Ghana, Cameroon and Nigeria to support sustainable cocoa productivity growth, food security and increased incomes on diversified cocoa farms. In October 2017, WCF members (under WCF's Cocoa & Forests Initiative⁵³), Côte d'Ivoire and Ghana announced a far-reaching ***Joint Framework for Action*** (see box below) to end deforestation and restore degraded forest areas.

⁵² A non-profit international organization which regroup the world's leading cocoa and chocolate companies to promote a sustainable cocoa economy through economic, social and environmental development,

⁵³ The Cocoa & Forests Initiative was initiated by IDH – the Sustainable Trade Initiative, the Prince of Wales's International Sustainability Unit (ISU) and the World Cocoa Foundation (WCF), in partnership with the governments of Côte d'Ivoire and Ghana. The first step was the launch of an industry Statement of Intent to end deforestation and forest degradation in the cocoa supply chain at a meeting in London by HRH The Prince of Wales in March 2017.

Joint Framework for Action for Côte d'Ivoire

The signatories of the Joint Framework for Action commit to work together both technically and financially for the preservation and rehabilitation of forests, according to and as defined in prevailing national forest policy, in Côte d'Ivoire.

The Framework is structured around the following three themes:

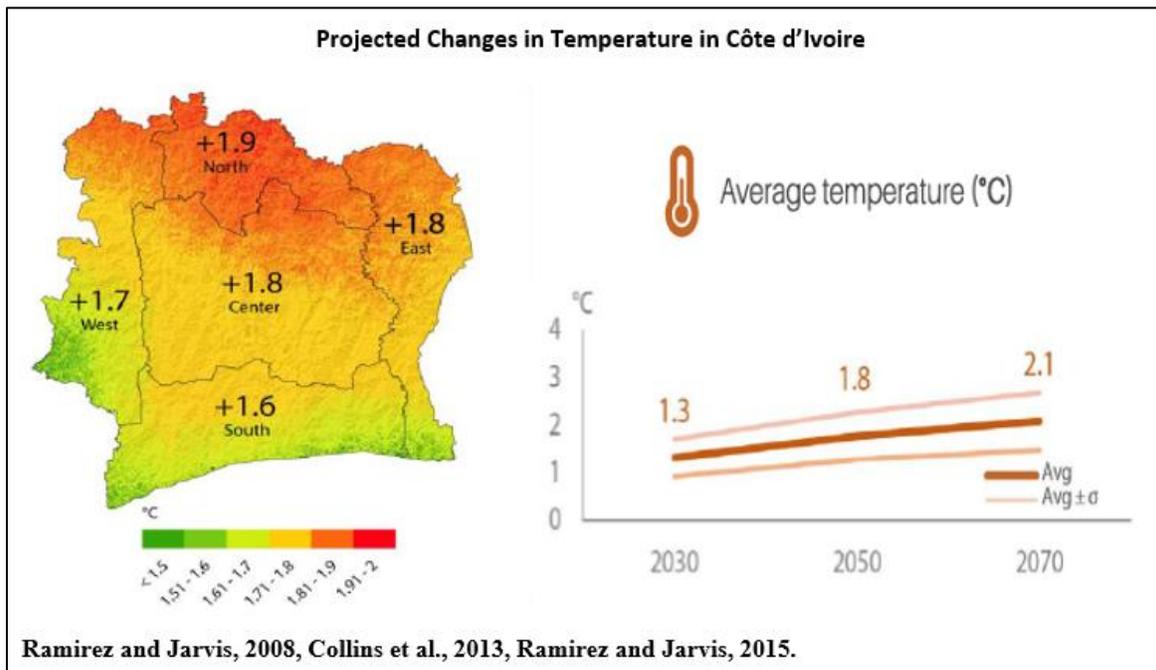
- Forest protection and restoration: this covers the conservation of National Parks and Reserves, improving the forest cover in the rural domain, as well as restoration of Classified Forests that have been degraded by human activities, in particular encroachment by cocoa farms among other factors;
- Sustainable production and farmers' livelihoods: this covers sustainable intensification and diversification of production in order to increase farmers' yields and income and to reduce pressure on forests; and
- Community engagement and social inclusion: this covers social safeguards through civil society and community engagement.

Under this Framework, Government and signatory companies agree to eight core commitments:

- Prohibit and prevent activities in the cocoa sector that cause or contribute to any further deforestation or forest degradation in National Parks and Reserves, Classified Forests, and conserved forests in the rural domain, such as sacred forests.
- Respect the rights of cocoa farmers, including identifying and mitigating social risks, and sequencing the implementation of actions to minimize potential adverse social and economic impacts;
- Promote the effective restoration and long-term conservation of National Parks and Reserves, and Classified Forests;
- Strengthen supply chain mapping, with the end goal of full traceability at the farm-level;
- Implement verifiable actions and timebound targets on the basis of sound data, robust and credible methodologies, stakeholder consultation, and realistic timeframes;
- Implement agreed actions in the context of a broader landscape-level approach, with strong links with similar initiatives in other commodities, and full alignment with the national REDD+ strategy and other relevant national strategies and plans;
- Work together to implement the Framework actions, and mobilize the necessary financing, resources and technical support for implementation, including continued engagement in a multi-stakeholder process for dialogue on key issues, development of effective implementation plans, joint learning and knowledge sharing and enable institutional capacity; and
- Provide effective monitoring and reporting on progress on commitments and actions to ensure transparency and accountability.

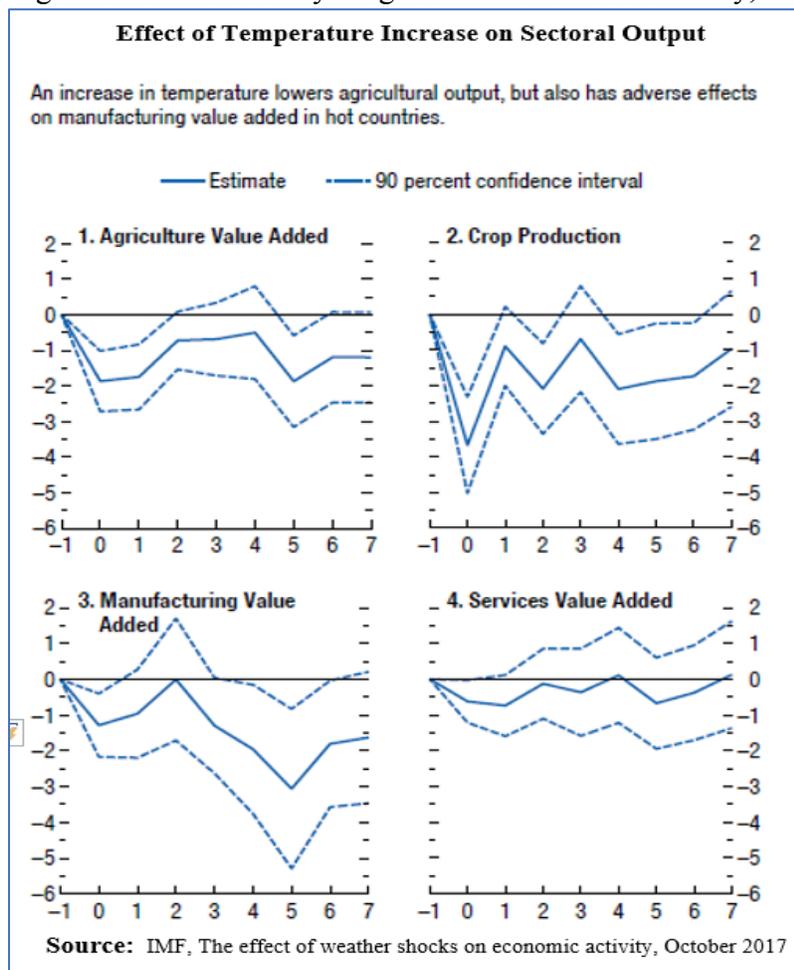
4.4. Climate change

96. **Climate change is already evident in Côte d'Ivoire and is projected to worsen in the future.** Climate change can already be detected in Côte d'Ivoire with increased temperatures, greater weather variability and more extreme weather events. Since 1961, the temperature has increased between 0.5 and 1.0 °C. Climate change scenarios⁵⁴ predict that temperature will further increase by about 1.3°C by 2030, 1.8°C by 2050, and 2.1°C by 2070, with the north, east and central regions being the most affected. They also predict a continued increase in rainfall variability and, although less consistent, generally a decrease in annual precipitation (except in the South West) ranging from of 50–100 millimeters up to 200-300 millimeters in the North.



⁵⁴ World Bank Climate Change Knowledge portal. The CNRM model predicts for 2050 a temperature increase of 2–2.50C across the country for the average daily maximum during the warmest month. The ECHAM model predicts an equivalent increase in the north, but it projects a rise of only 1.5–20C in the southern half of the country. The CSIRO GCM shows a decrease in precipitation of 100 to 200 mm in the northern half of the country, while MIROC3.2 shows a decrease of up to 400 mm in the southwest and a decrease of 100 to 200 mm in the southeast.

97. **There is a consensus that climate change will have a deep impact on Cote d’Ivoire economic and social development through various channels.** The most obvious one is agricultural output, but it also has broader impacts, including on labor productivity, mortality, health, and conflict. According to the *Groupe d’experts intergouvernemental sur l’évolution du climat (GIEC)*, climate change could induce a GDP drop of 2-4 percentage points by 2050 in Sub-Saharan Africa, and over 10 percentage point by 2100. Climate change impacts will be particularly negative for the country’s agriculture and food security, and agricultural households that are



among the poorest and most vulnerable. Agricultural production, mostly rainfed, will be particularly affected. Rising temperatures are expected to decrease in the yields of major crops and/or render certain areas less suitable or even completely unsuitable for specific crops. Models (MIROC) projects scattered yield gains in some parts of the north and south but mostly yield losses of more than 25 percent in the central region, and losses of 5–25 percent to the east and west. Incidences of pests and diseases will increase, and crop quality is likely to suffer. Smallholders who produce most of the crops, are the most vulnerable group – and the least equipped to cope with the changes. These changes will be

gradual over a long period of time, but the time to prepare for the necessary adaptation is now.

98. **In view of this, the government should develop comprehensive strategies to cope with the stress and damage that climate change can impose.** Various mitigation options are available to farmers to adopt a “climate smart” agriculture, including, inter alia: (i) the use of drought-resistant and/or pest-resistant crop varieties; (ii) the adoption of appropriate soil fertility management methods (rotations and of no-till or reduced tillage); (iii) the appropriate use of chemical and organic fertilizers; (iv) the use of agroforestry, (v) improved irrigation and water management. These issues should be high on the national research and extension agenda. Also, institutions such as community organizations and NGOs play a very important role in the farmers’

uptake of climate change adaptation and mitigation practices. Investing in their capacity to tackle these new challenges and engage with smallholder farmers would be an important step towards tackling the challenges of climate change. Finally, other responses could include diversification to non-farming activities, establishing financial mechanisms, including climate insurance and access to micro-credit to facilitate adaptation.

99. **A robust and broad-scale package of climate-smart initiatives is needed to help Côte d’Ivoire’s agricultural sector address these challenges.** The recent *Climate-Smart Agricultural Investment Plan (CSAIP) for Côte d’Ivoire*⁵⁵. The CSA was developed through a participatory process (local experts from Ivoirian national organizations supported by CGIAR) to review the available information and identify and prioritize appropriate CSA investments⁵⁶. A final short list of 12 proposed investments were selected to be developed into project concepts⁵⁷. Taken together, these 12 project concepts aim to reach over 2.2 Million beneficiaries. Four priority national-scale initiatives have been selected for detailed economic analyses: agro-meteorology, finance services, soil fertility and agricultural extension. Together, these initiatives represent the foundation of a climate-smart agricultural strategy by providing both the real-time information farmers need to make decisions (e.g. agro-climatic information and soil fertility monitoring) and the guidance, knowledge, and financial support for the needed investments.

4.5. Access to financial services

100. **Access to financial institutions by small producers is extremely limited.** Few agricultural households can get credit, including through cooperatives (it is estimated that less than 5% of cocoa cooperatives have access to credit, essentially short-term credit). Commercial banks lend essentially to large enterprises and for short-term purposes such as procurement and marketing of export crops. Their business model, network and skills do not allow them to lend to small producers or their associations⁵⁸. Other types of services - such as investment credit, crop insurance or risk capital – are little diversified. Most producers finance their working capital and investment needs on their own resources. While 15 percent of farmers report having taken out loans in the past year, just 11 percent of these (i.e., less than 2% of all farmers) got loans from a

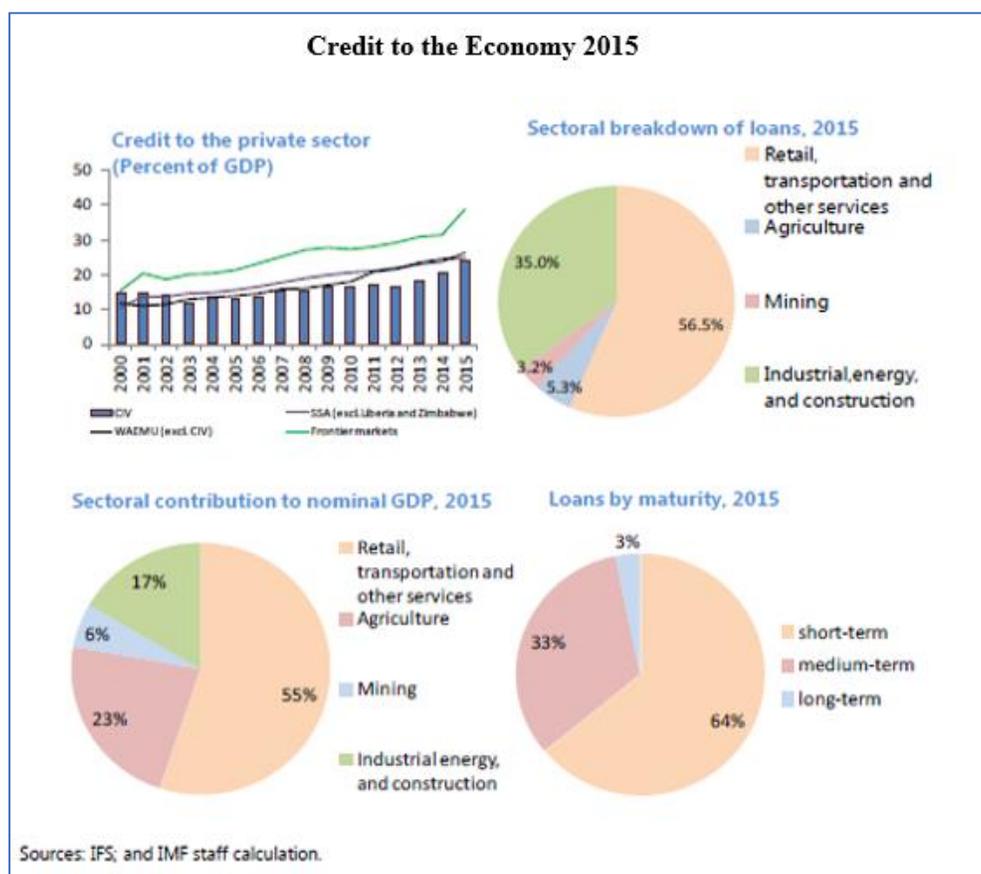
⁵⁵ Climate Smart Agriculture Investment Plan for Côte d’Ivoire, World Bank, draft November 2018.

⁵⁶ Many plans and programs provide analyses and targets, including: National Climate Change Program (2012); the Second National Investment Plan for Agriculture (PNIA2, 2017-2025); the Strategic National Plan for the Development of Livestock, Fisheries and Aquaculture (PSDEPA); the Strategic Plan for the Rehabilitation and Development of Forests (PSRDF); the National Strategy for Disaster Risk Management (NSDRM); and the National Program on Climate Change (NPCC), the National Development Program (NDP; 2016-2020) and National Agricultural Investment Program (NAIP II); and the Country Partnership Framework for Côte d’Ivoire.

⁵⁷ Against their potential impact on: a) climate smartness (productivity, adaptation, mitigation); b) co-benefit outcomes (employment, GDP, contribution to other national commitments and strategies); c) likelihood of success (farmer adoption likelihood, scaling out potential, and sustainability after project ends); d) alignment with AAA pillars and priorities; e) likelihood of mobilizing funds from specific sources.

⁵⁸ This is not specific to Cote d’Ivoire. Worldwide, less than 2% of credit to small agricultural producers is provided by commercial banks.

formal financial institution. The vast majority of their credit came from informal sources (friends and family members or traders). The main constraints for agricultural producers to access financial services are : (i) a still insufficient rural branch network (59% of the 4050 access points⁵⁹ are in Abidjan...); (ii) the reluctance and lack of capacities of banks to deal with credit to agriculture, with a perceived high risk without any possibility of guarantees ; (iii) the low credibility and reliability of most cooperatives as retailers of credit ; and (iv) the high real interest rates on loans (MFI generally charge up to 30% p.a.) which is not compatible with the financing of most investments



101. Other actors providing credit are the private companies involved in export crop value chains such as, in particular, ginning companies in the cotton sector where the risk of side selling is low, due to the prevailing geographical procurement zoning, In the other value chains (rubber,

⁵⁹ Composed of 3102 points of e-finance; 570 bank branches; 251 points of micro-finance institutions; and outlets of the postal network.

oil palm, cocoa, cashew), where the risk of side selling is higher⁶⁰, some private companies are making attempts at establishing contractual relationships with producers and providing credit to cooperatives which appear to be reliable partners. This is the case for example for CARGILL in the cocoa sector which provides credit to a few cooperatives, including for investment purposes, under a partial guarantee and first loss arrangements under an IFC operation⁶¹. Finally, some financing is also provided by Interprofessional bodies in the cocoa, rubber and oil palm sectors through the subsidizing of critical inputs such as planting material.

102. There is a strong link between financial inclusion and global economic development. Greater availability of, and access to, financial services gives households and firms better access to savings instruments and credit. For households, better financial inclusion allows them to better deal with their needs, for productive activities but also for their other priorities, which in fact appear to be the most pressing (financing farm inputs represent the lower purpose mentioned at 7% according to a recent survey). Financial inclusion also greatly reduces transaction costs. Although it is one of the best performing economies in Africa and its financial access landscape has been improving in recent years, Cote d'Ivoire still lags behind much of Sub-Saharan Africa in terms of financial inclusion. According to the World Bank, in 2014 some 29 percent of adults in SSA had an account with a bank or other formal financial institution, up from 24 percent in 2011. In Côte d'Ivoire, the figure is much lower, with only 15 percent of adults having a formal account in 2014, just about half of the SSA average and an increase of only 1.7 percent from 2011. Access to financial services is also marked by sizeable gender and rural/urban disparities. The financial inclusion gender gap (measured by accounts at a financial institution) is about 6 percent. The rural/urban gap is even higher: 10 percent of adults in rural areas have an account in a financial institution compared to about 20 percent of adults in urban areas.

103. The micro-finance sector has considerable potential to provide financial services to low-income households, including in rural areas. They provide short-term loans and working capital mainly for commerce and to households. The largest micro-finance institution (UNACOOPEC-CI) has about 635 thousand members⁶². Most of the MFIs do not provide credit for productive activities or investments, and many are financially weak and unable to deliver satisfactory services to their members⁶³. However, the sector has also some modern and sound

⁶⁰ In the rubber and oil palm sectors, Interprofessional bodies are establishing systems to monitor input distribution and producers' individual production to reduce potential side-selling and recover credit.

⁶¹ It is estimated that less than 5% of all cocoa cooperatives have access to financial services

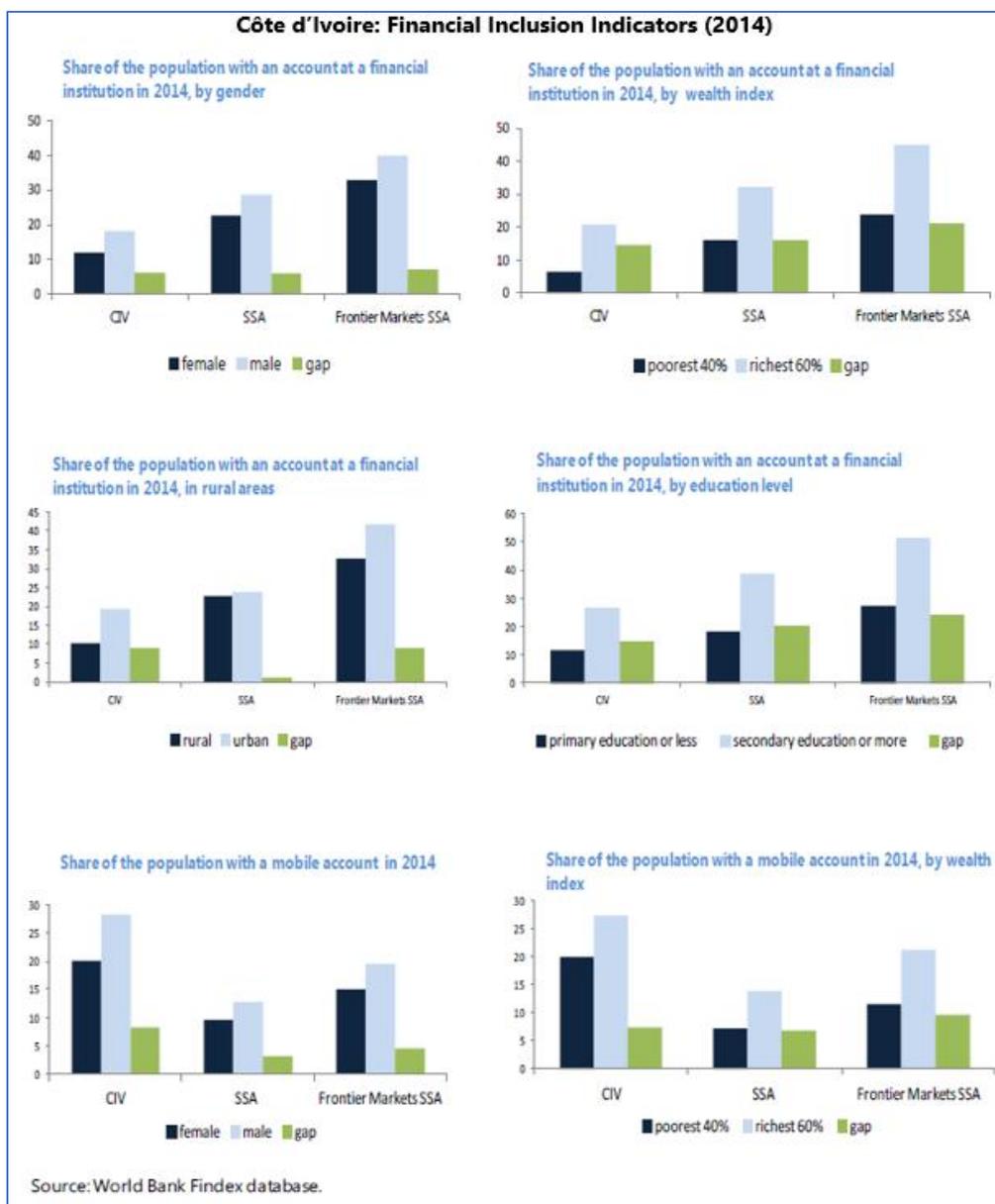
⁶² However, with large losses and negative capital, it has been under provisional administration since September 2013.

⁶³ The supervisory authority has taken steps to strengthen the sector by withdrawing the licenses of several micro-financial institutions. Other measures to improve the sector's governance include strengthening supervision with technical assistance (e.g., Agence Française de Développement) and training to improve reporting standards and practices.

micro-financial institutions, including Credit Access, Advans-CI and Microcred-CI, some of which are branches of international micro-financial institutions. These are providing short-term loans and working capital to low-income households and firms and have begun to expand to rural areas, particularly those with cocoa farms. Some of the modern micro-financial institutions are working together with telecommunication companies to provide services through mobile networks.

104. Côte d'Ivoire's *strong mobile phone penetration* also presents an opportunity to foster stronger financial inclusion through the development of technology-based financial services.

The share of mobile cellular subscriptions per 100 people in Côte d'Ivoire increased from 13 in 2005 to 95 in 2013. Mobile financial services were introduced in 2008, and major mobile operators like Orange Money and MTN Mobile Money dominate the market. Adoption of mobile money has increased rapidly, boosted by government and private sector partnerships for implementing e-payment systems. In 2017, 38% of the adult population (ages 15+) had a registered mobile money account. Côte d'Ivoire is now the largest market in the WAEMU for mobile transactions. Mobile accounts are used for a wide range of transactions including the payment of school fees via mobile phones, and increasingly, for cross-border remittances. Mobile services are particularly important for farmers who are usually paid in cash and routinely must travel long distances to make or retrieve payments, which is not only very costly but also exposes them to risk of robbery and personal injury. Currently however, mobile accounts facilitate payments and money transfers but do not provide access to credit. Also, a common barrier to financial inclusion access and adoption of any formal financial institution is a lack of digital skills and financial literacy. As Cote d'Ivoire's economy is poised to continue growing quickly in the coming years, a key part of the country's financial inclusion initiative will be to bridge the digital and financial literacy gap among the unbanked and unregistered users.



105. **Strengthening the financial system is essential if Côte d'Ivoire wishes to continue on the path to emergence.** Raising its financial development index to the level observed in Cabo Verde or Namibia, its economic growth could increase by 2.4%. If it equaled that of South Africa, its growth could expand by more than 5%. To promote a greater role for the financial sector in supporting growth, the authorities formulated a financial sector development strategy (FSDS, 2014) and implemented regulatory reforms to strengthen the soundness of the financial sector and

promoting the development of technology-based financial services⁶⁴. This strategy is being supported by the World Bank Group through: (i) a Financial Sector Strengthening Initiative (FIRST) project on financial stability and inclusion; (ii) a FIRST project on affordable housing-finance in the WAEMU region; (iii) assistance to set up the regional credit bureau; (iv) a sustainable leasing infrastructure program with a new regulatory framework and assistance to leasing institutions; (v) a financial inclusion support framework (FISF) focused on monitoring inclusion, digitalization of government payments, modernization of agent banking regulation and microfinance law, agriculture finance, and financial consumer protection.

4.6. Human resources

106. **Human capital constraints hold back agricultural productivity and innovation.** The overall education level of Côte d'Ivoire's farmers is a major constraint to agricultural development. Currently, the current low educational levels of producers and other actors of the agricultural value chains. It is estimated that about 60% of farmers have never been to school and that rural literacy rate is very low among adults at 25%. Increasing agricultural productivity (and income) will require moving toward more intensive production systems and a diversification of the production mix into higher-value crops. This in turn will require not only an improved access to technologies and finance, but also a major effort at improving farmers' knowledge and skills for moving to more knowledge-demanding crops, in terms of both technical and management/business skills (agribusiness, agricultural economics, farm management, marketing, rural finance, and others)⁶⁵.

107. **Existing farmers, most of whom have little education, need access to effective agricultural training/information services to sharpen their skills, access information on new technologies and markets.** As already mentioned, the Ivorian agricultural advice system, while reasonably efficient, can be greatly improved by making them much more responsive to producers' needs, the better technical qualification of the staff (in particular in climate-smart agriculture), a greater focus of the farm as an integrated enterprise instead as purely on specific technologies and on "soft" skills" and market information. Traditional face-to-face extension should be

⁶⁴ For example, mobile phone companies could grant loans, as they do in Kenya, where the carrier Safaricom opened a credit department in 2013 in partnership with a bank (M-Shwari). Today, it has more than 10 million customers. The report also recommends authorizing microfinance institutions to issue bank debit and credit cards.

⁶⁵ Formal technical training in agriculture is provided by public institutions such as the *Ecole Nationale Supérieure d'Agronomie* of the INP-HB de Yamoussoukro, 9 public agricultural schools overseen by the *Institut National de formation Professionnelle Agricole (INFPA) of the Ministry of Agriculture*, a small number of universities with agricultural departments and training centers from the Ministry of Technical Education (including two centers focusing on agroindustries). There also exists a significant number of private institutions offering agricultural training, such as the *Institut des Nouvelles Techniques Agricoles (INTA)*. In addition, the training centers of ANADER (*Agence Nationale de Développement Rural*) offer short-term refresher training to agricultural technical staff and producers. Other various programs offer training in agriculture and rural activities to youth in rural areas, such as that of the *Plateformes de Services (PFS)* or the *Ecoles Familiales Agricoles (EFA)* implemented by the NGO IECD (Institut Européen de Coopération et de Développement) since 1998

supplemented by the increased use of E-Systems for distance learning and access to market information.

108. **A major effort should also be made for the adequate education and training of rural youth.** About 200,000 youth enter the labor market in rural areas every year, the large majority without any education or technical skills, and many need to find productive employment in rural activities, largely in agriculture. Although a growing share of the youth entering the job market will exit agriculture, this trend is likely to continue in the foreseeable future, since rural population is projected to continue growing at least until 2050. Sustained increases in the productivity of these future agricultural/rural jobs is therefore a critical issue both for agricultural growth and poverty alleviation. It is also critical for slowing down labor migration to urban areas which have difficulties in providing the necessary infrastructures and where migrants find mostly low-productivity jobs in the informal sector. To do so will require a major effort at several levels: (i) improving the performance of the general primary education system in imparting the basic skills - reading, writing, and numeracy – necessary for a modern agriculture but also for the development of the rural economy at large and for rural migrants to be productive in urban employment; (ii) introducing the curricula of primary education in rural areas some basic information/training in information and skills relevant to agriculture and rural life and/or offering to rural children not moving to secondary education the possibility to complement the basic generic skills with a short period of vocational training on relevant activities; (iii) developing a much more efficient national agricultural education/training system, at intermediate and higher levels; able to provide the necessary skills for profitably integrating increasingly competitive value-chains;

109. **Rehabilitating the national Agricultural Education and Training (AET) system would allow to leverage gains in primary education to build the stock of knowledge specific to agricultural development.** The quality of public institutions providing agricultural training is unequal, due to a lack of adequate facilities, teaching staff and financing⁶⁶, and in general insufficient to provide producers with the skills required for adopting and using effectively modern technologies and responding rapidly to changes in market demand. A major effort is thus needed to upgrade not only the quality of their technical programs but also, to develop more comprehensive programs providing, beyond technical skills, the business and behavioral skills essential for success. More practical, real-life training is also required to provide students with real-life experience under controlled conditions through agricultural/agroindustrial incubators⁶⁷. These public institutions should be linked much more closely with the private sector to develop curricula and impart skills directly relevant to the demand of the markets.

⁶⁶ It is estimated that public agricultural education and training (AET) schools get less than 15% of the total funding of technical education).

⁶⁷ Agricultural incubators are being piloted, on a limited scale, under the PEJEDEC.

4.7. Structuring efficient and inclusive value chains

110. **In 2012, Government vision for the country’s “21st century agriculture” was clearly a sector dominated by contractual arrangements between the private actors of structured value chains.** It was understood that the competitiveness of Cote d’Ivoire’s agriculture would depend not only from the sustained generation and adoption of improved technologies, at all levels of the value chains, but also on the capacity of these value chains to be well coordinated to efficiently manage their common goods and ensure an efficient access of production to markets.

111. **The vision is taking some time to materialize.** Currently, Cote d’Ivoire’s agricultural sector, mostly⁶⁸ composed of small producers, includes (i) a limited number of well-organized value chains in the export crop sector (rubber, oil palm, cotton) which have been able to offer small producers a good access to markets and provide them with the goods and services they need; (ii) a few other value chains which are currently only loosely organized but under active programs for their better structuring (cocoa/coffee and cashew for example, or to a lesser extent rice); and (iii) a large number of food crops value chains, (maize, cassava, yam, plantains) which are managed largely through informal arrangements and “the invisible hand of markets”. In these informal food crop value chains, there is in general intense competition along the value chain and their marketing system is generally efficient, although there is no regulatory or interprofessional body (except for the onion value chain). There are however initiatives to improve the vertical coordination within some of these value chains, such as the establishment of local “Innovation Platforms” in the rice and plantain sub-sectors (supported under the IDA-financed WAAPP).

4.7.1 Interprofessional Bodies

112. **Cote d’Ivoire has a long tradition with interprofessional bodies for the management of specific value chains.** The first, the « *Association des Professionnels du Caoutchouc Naturel de Côte d’Ivoire (APROMAC)* » was created in 1975. The others (INTERCOTON, AIPH et INTERPORCI) were created in the late-1990s after the liberalization of their respective sub-sectors imposed a concertation between the different actors of the value chains. In 2011, the Government adopted an Ordonnance⁶⁹ (December 2011) to clarify the mission, structure and operational modalities of these Interprofessional bodies. The Ordonnance officially establishes the transfer by the State of some of its prerogatives to the Interprofessions (“extension”), making mandatory the respect of their policies and regulations by all their members. Intercoton (2014), AIPH (2015) and the Onion value chains (2016), already well organized, have been the first officially recognized formal Interprofessions. Others value chain associations, such as APROMAC (Association des Professionnels du Caoutchouc Naturel de Côte d’Ivoire, created in 1975) in the rubber sector, are taking the necessary steps/measures to be officially recognized. In parallel, the

⁶⁸ Excluding crops such as bananas and mangoes which are very demanding in terms of quality and logistics and dominated by a small number of medium-to-large commercial enterprises.

⁶⁹ Ordonnance 2011-473 of 21 December 2011.

Government has also created new public-private institutions to assert State control over the main value chains: the Conseil du Café et du Cacao (CCC) for the cocoa/coffee sub-sector (2011), the Conseil du Coton et de l'Anacarde (CCA) for cashew sub-sector and the Conseil Hevea-Palmier for rubber and oil palm sectors (2018). Cote d'Ivoire has a long history of a State intervention in the management of the country's main agricultural value chains (cocoa, cotton), and releasing the State grip doesn't come naturally. These "Conseils" carry out the State's legitimate regulatory role but are also responsible for the operational management of the value chains. Although their Boards include representatives of the private actors of the chains (producers, traders, processors...) they are dominated by the State.

113. **Efficient value chains management require good horizontal and vertical coordination at all levels, to allow collective decision-making, the consensual management of common goods (sustainable development strategy, pricing, research, quality) and the equitable distribution of the overall value added.** The establishment of efficient and equitable value chains requires Government support to arbitrate among the chains actors and ensure that producers are well-organized to have the necessary weight in collective decision-making to efficiently represent their interests. Government involvement in the management of nascent value chains is generally justified for arbitrating between actors with very different market power and ensuring the legitimacy of the representatives of each category of actors within interprofessional arrangements. It is also and, most importantly justified for building the capacity of producer associations which are very often very weak. This is currently the case in the cocoa and cashew sub-sectors. However, hybrid institutions like the "Conseils", combining regulatory and operational responsibilities, dominated by the State and with no clear accountability to the other actors, do not permit a clear separation of regulatory and operational functions or the good governance of the value chains. This merger of regulatory and operational responsibilities should therefore be temporary and clearly framed by a program aiming at Government conserving only its regulatory functions after the capacities of private actors have been strengthened. Current government policies in this respect are still ambiguous and need to be clarified.

114. Currently, the situation for the main value chains can be summarized as follows:

- The "**Conseil Coton-Anacarde (CCA)**" was created as part of the cotton development strategy adopted in 2013. It is responsible for regulatory functions, but it also exerts a tight control over the value chain's operations. It covers two value chains with very different histories and organizations. The *cashew value chain* has developed very fast over the last two decades, largely under informal, private sector-led operational arrangements. In 2013, when the "Conseil" was created, the value chain was dominated by traders and a few processors, and there were very few formal producer associations. There was therefore no real basis for the establishment of a formal Interprofessional body. The value chain is currently being structured under the management of the "Conseil Coton-Anacarde".

- *The cotton value chain* on the other hand was, until the beginning of the 2000s possibly the best organized value chain, managed by an efficient Inter-profession-like body (Intercoton)⁷⁰. The value chain has however been deeply disorganized during the country's political crisis, with the near complete disappearance of producer cooperatives under the combined actions of a government hostile to what it saw as the emergence of a strong countervailing power in the North of the country and cotton companies intent in conserving an undisputed monopsony over the production of seed cotton. Under the 2013 strategy, exclusive procurement zones have been given to ginners, in principle for a temporary/transition period (of an undetermined length), until producers/producer associations have been sufficiently strengthened to be given the responsibility for the marketing of their seed cotton and manage the provision of technical services. In these exclusive zones, ginners also benefit from the exclusive right to provide producers with inputs and technical support, Today, Intercoton is still operational, under the oversight of the "Conseil". It has been officially recognized as a formal Interprofession (according to national and OHADA legal frameworks). Producer associations are being rebuilt. This rebuilding efforts started in 2010 with EU and World Bank assistance (under the IDA-financed Agricultural Support Project -PSAC).
- However, this process has been slow, with only a weak support from Government and ginning companies. Although cotton cooperatives and federations are emerging, there are still about 3,500 largely informal cotton producer groups (for a total of about 100 000 producers), scattered over 3,500 villages, This system gives considerable power to ginners who have no real incentives either to assist in the development of strong cooperatives or provide the services producers need (i.e. the quality of their technical support to producers have been repeatedly called into question). In principle, the transition period should be used to move toward a management of the sector based on freely negotiated contracts between strong producer cooperative and ginners/service providers where producer cooperatives would be responsible to enter, through a competitive process, into contracts (i) with ginners for the sale of their seed-cotton; and for (ii) service providers for the mobilization of inputs and services. For the moment, it is far from clear that ginners and /or government will indeed support a quick transition to this system.
- The "*Conseil Café-Cacao (CCC)*" was established in 2011 with both regulatory and operational responsibilities. Its Board of Directors included until recently representatives of Government, producers and exporters and financial institutions. The cocoa/coffee value chain includes exclusively of smallholder producers, weakly organized (less than 40% of cocoa producers are currently members of cooperatives). The new strategies for the development of the cocoa/coffee sector (adopted in 2011), which established the CCC envisaged the separation of the regulatory and operational functions and outlined the steps for the strengthening of

⁷⁰ After the privatization of the cotton parastatal (CIDT), the elimination of exclusive procurement zones for ginners, and the emergence of strong producer associations (with the long-term assistance of the Canadian CECI).

producer associations required to do so. So far however, CCC has however behaved as a true parastatal, with little decision-making power given to the private members of the Board. The latter were in fact recently eliminated from the Board by Government. In addition, Government support for the strengthening of cocoa producer cooperatives, a major tenet of the sector's development strategy and a pre-requisite for the establishment of a credible Interprofessional body, has been lukewarm at best⁷¹. The only real initiatives in this respect have been undertaken by the major cocoa exporters under their respective certification programs. Their support includes the financing, in addition to the certification process itself, that of marketing infrastructures, of social infrastructure for the concerned communities and of capacity-building programs for cooperatives (i.e. CARGILL's coop Academy).

- The *Conseil Hevéa-Palmier (CHP)* includes world-class agro-industrial enterprises and many of its individual producers are commercial farmers with a good knowledge of markets. These value chains have long been organized into well-functioning informal Inter-professions (APROMAC for rubber and AIPH for oil palm) which have set up their consensual mechanisms for the determination of producer prices (with a sharing of market risks among all actors) as well as development funds for the provision of critical inputs (planting material) and services (technical advice through FIRCA, assistance for land demarcation and registration) and even the financing of the maintenance of priority rural tracks. There would therefore be little justification for a "Conseil" having both regulatory and operational responsibilities;

4.7.2 Cooperatives

115. **The emergence of strong producer associations is a major prerequisite for the establishment of efficient value chains and a modern, contractual; agriculture.** Although an official policy, the development of genuine producer organizations, with real countervailing/negotiating power, has long been resisted by the State which saw producer groups mostly as a simple relay for the government political agenda. Monopolistic parastatals (cotton, rubber, oil palm) also saw them as silent relays for their own operations. Producer cooperatives started to become stronger by the mid-1990s, in particular in the oil palm and cotton sectors. In the cotton sector, this impetus was however broken by the long political and military crisis of the 2000s. A new legal framework for cooperatives was adopted in 1997 aiming at their establishment of cooperative as genuine business enterprises. This framework was however only loosely applied by the ministry in charge of agriculture and many agreements were delivered for "cooperatives" that were in fact either instruments for capturing subsidies or mere spring-boards for local political ambitions.

⁷¹ The ministry of agriculture announced in 2012 its intention to implement a program for the elimination of "bogus" cooperatives and the strengthening of bona fide producer associations. So far, 6 years later, despite the support provided under the IDA-financed PSAC, little progress has been achieved.

116. **Some timid progress has been observed since with the approval of the “*Acte Uniforme of OHADA*”.** In 2011, existing cooperatives were given two years (until May 2013) to conform with the stipulation of the new Cooperative framework⁷². As of 2016 more than 4,000 existing cooperatives had received their OHADA agreement, but only a fraction were, or had a chance of becoming viable enterprises. For example, more than 2,800 cocoa cooperatives have received an agreement from the ministry of agriculture in the cocoa sector. In the cotton sector, although efforts have been under way since 2010 to strengthen and restructure the cooperative sector, only about 300 have received their OHADA agreement while there still exist more than 3,900 village producer groups averaging about 30 members (see above) and ginners do not appear keen to promote the emergence of true cooperatives that could take over some of the activities (agricultural advice, input supply) they are performing now and on which they are making a profit⁷³. In the food crop sector, there currently exist more than 2,000 producer cooperatives (and many more informal groups), of which less than 500 have been OHADA certified (151 in the rice value chain). Only in the rubber and oil palm sector do exist producer cooperatives of an adequate size and able to deliver services to their members.

117. **Major efforts should be devoted to promoting the emergence of strong and viable producers’ associations.** The emergence of a competitive agricultural sector where producers can benefit from an equitable share of the value added along the value chains will require a major and sustained effort for the emergence of producer associations. These producers associations must be: (i) viable and competitive business enterprises able to provide their member with inputs and services; (ii) e real partners of other actors of the value chains, and (iii) have a definite voice in issues affecting their livelihoods.

⁷² Two kinds of cooperative institutions are allowed under OHADA: full-fledged cooperatives with Boards of Directors (coop-CA) and Simplified Cooperatives (SCOOP) with a management committee.

⁷³ Olam may be an exception. It is currently undertaking a program in cooperation with IFC to strengthen the producer associations/cooperatives in its area of activity.

Cooperatives having received OHADA certification (2016)									
Régions	Café Cacao	Anacarde	Vivriers	Coton	Riz	Hévéa	Palmier	Fruits	TOTAL
AGNEBY-TIASSA	144	1	7		2	5	2		161
BAFING	7	9	1		3				20
BAGOUE		23	8	33	6			2	72
BELIER	38	12	8	6	3				67
BERE		12	3	26				1	42
BOUNKANI		17	4		16				37
CAVALLY	120				4	2			126
FOLON	3		1	5					9
GBEKE	2	13	19	3	11		3		51
GBOKLE	103				2	1	4		110
GÖH	212				2				214
GONTOUGO	31	46	26			3		1	107
GRANDS PONTS	47	2	19		2	6	8		84
GUEMON	242	2	9		9	4	3		269
HAMBOL	1	29	10	6	10			2	58
HAUT-SASSANDRA	354	6	2	2	7				371
IFFOU	5					1			6
INDENIE-DJUABLIN	170		2		3	1			176
KABADOUGOU	7	37	34	16	6	2		1	103
LA ME	86		2			2	1		91
LÖH-DJIBOUA	266	2	6		3	1	2		280
MARAHOUÉ	169	60	8	14	7				258
MORONOU	39	4	5		2		1		51
NAWA	212					1	2		215
N'ZI	6	3	2		1		2		14
PORO		54	37	83	16			19	209
SAN PEDRO	327		2		6	14	5		354
SUD-COMOE	83		5			15	15	1	119
TCHOLOGO		54	41	63	17			9	184
TONKPI	125	2	16		11				154
WORODOUGOU	33	33	24	8	2				100
Total	2 832	421	301	265	151	58	48	36	4 112

Source: DOPA, Ministry of Agriculture.

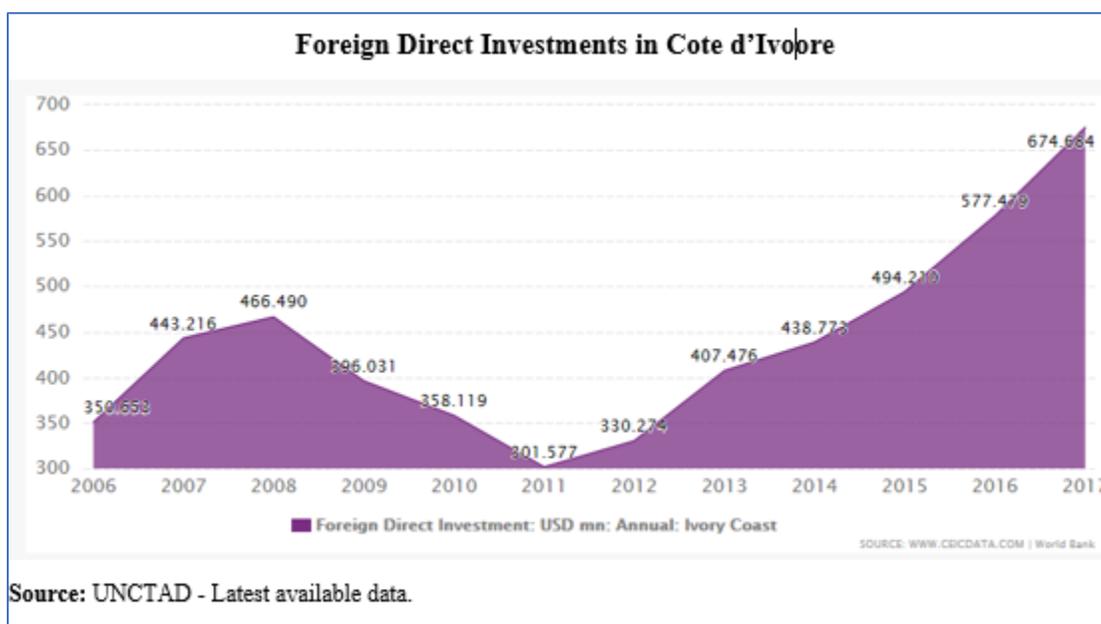
4.8. Improving the Business Environment for Agriculture

118. Future agricultural growth will require considerable private investments, from producers and larger investors to modernize production systems and create more value added. The National Plan of Development (PND 2016-2020) aims at making private investment a motor of the country's economic growth. Côte d'Ivoire has considerable potential in agriculture and agro-business, a reasonable infrastructure in the process of modernization, a strategic coastal location.

119. Since 2012, the country's macroeconomic management has been good and the Ivorian government has made some significant strides in improving its business environment: (i) the adoption of a new Investment Code; (ii) the reform of the legal system to create commercial courts to issue judgements within 90 days; (iii) the creation of a competition commission responsible for detecting and prosecuting anti-competitive practices; (iv) the establishment of a one-stop shop for

business creation. It has also launched a vast program of major transport infrastructure projects, including the privatization of the Abidjan-Ouagadougou railway line and the extension of the port of Abidjan. Moreover, important recent land reforms are expected to pave the way for easier access to industrial land. The authorities are planning to pursue the reform drive with the goal of positioning the country among the top ten global performers.

120. **Although overall private sector investments are increasing, they remain modest in agriculture.** Private sector investments have increased from 5.7% of GDP in 2011 to 14% of GDP in 2017. They are mostly in the public works, mining, construction and tourism sector. In agriculture, investments have been made in the processing of cocoa and cashew (with strong fiscal incentives). On the other hand, little investments have been made in other value chains such as rubber, where there is currently an important deficit in terms of capacity, with exports of coagulum, cotton or other competitive and high value activities (fruits,...). However, private investments they remain relatively low compared to fast developing countries where it averages close to 20% (e.g. Ghana and Benin) indicating that there are significant opportunities to leverage private investment further. Also, Cote d'Ivoire has attracted foreign direct investments (FDI), but though on the rise in absolute terms, foreign investments remain low relative to the country's GDP (at almost pre-conflict levels) and lag behind regional and global emerging comparators. FDI have been concentrated mainly in the telecommunications and extractive sectors.



121. **But the business environment is still relatively not conducive.** As indicated by the rankings of Cote d'Ivoire in both the 2019 Doing Business Report (122 out of 190 and the Global Competitiveness Report of the World Development Forum (114 out of 140 countries), Cote d'Ivoire's business environment conditions have not yet improved enough to attract the volume of private investments that would be needed to drive the country to the emerging country status. The

key constraints to private investments coming from the DB report and enterprise surveys appear to be transport logistics, access to land, access to finance, the cost and quality of labor and governance issues. All these constraints are also binding on agriculture and agroindustries, in particular logistics and access to land and finance. In addition, access to inputs and markets -- trading across border (delays in clearing goods and the cumbersome customs and transit procedures), sanitary issues, inputs regulations... -- critical for agriculture, are also major constraints highlighted by the World Bank's 2017 Enabling Business for Agriculture. They have been discussed in detail in the previous sections.

122. Efficient logistics are very important for agricultural commodities, often bulky, with relatively low value and sometime perishable. In terms of short-term impact, reducing the exorbitant costs of importation and exportation and truck transport within Abidjan is likely the highest priority. Key constraints include Inefficiencies at the port of Abidjan, poor road network due to insufficient maintenance over a long period and the high costs of trading across borders. The road network has deteriorated considerably due to insufficient maintenance. Côte d'Ivoire's rural infrastructure has become severely dilapidated, with about 40 percent of the road network not or only partially useable. Also, while the physical efficiency of the Abidjan Port (loading/unloading cranes, handling) is generally considered good (capacity will be doubled by 2020 with the construction of a second container terminal), port access and clearance procedures, including customs, are a constraint for businesses, along with the high costs of services. According to the World Bank Doing Business, the Abidjan Port is the most expensive port in West Africa, a region where port costs are already considerably higher than for well-performing ports in other regions of the world). The major extension/rehabilitation programs launched by the Government should however improve the situation in the future.

123. There is also an urgent need to improve secured access to land to facilitate growth in agriculture and agroindustries. The programs recently launched by the government to speed up land tenure reforms on rural areas have been discussed in previous sections. Their implementation should be a high priority to encourage investment for the intensification of agricultural practices. The availability of *industrial land* also poses a major problem for agro-industries (and other manufacturing activities). As part of its strategy to increase processing, and in particular agro-processing, the government has launched a program to establish *industrial zones* (in the outskirts of Abidjan and other major cities). It has also started to establish special economic zones (SEZ) where investors benefit from fiscal incentives; business-friendly regulations with respect to land access, permits and licenses or employment rules; administrative streamlining and facilitation; and infrastructure support and access to main utilities, an especially important feature when basic infrastructure for business outside these zones can be poor. A SEZ has been established in 2004 in Grand Bassam near Abidjan (the Technology Park of Grand Bassam) with the objective of providing modern world-class facilities to accommodate international ICT and biotech companies looking to relocate their operations in Côte d'Ivoire. The government is planning to open others throughout the country. A regional special economic zone will in particular be established by the

three governments of Cote d'Ivoire, Mali and Burkina Faso in the SKBo triangle, composed of the regions of Sikasso (Mali), Bobo Dioulasso (Burkina Faso) and Korhogo (Côte d'Ivoire), the first special economic zone in West Africa that operates across borders.

124. **Finally, governance must be further improved.** Côte d'Ivoire is recovering from more than a decade of ethnic and political turmoil that plunged the country into civil war and post-electoral violence in 2010 and undermined the rule of law and effectiveness of governance institutions. Although the situation has been improving, corruption remains endemic, systemic, permeating all levels of society. Cote d'Ivoire ranks 105 out of 180 countries in 2019 according to Transparency International. The current high levels of perceived corruption is a major constraint to private investments. According to Enterprise Surveys, private enterprises show a deep distrust of the judiciary system to resolve commercial disputes; believe that that corruption and vested interests are firmly entrenched in the country's public institutions, which tend to be venues to promote personal agendas rather than policy objectives; report competing against informal or unregistered firms with the formal sector at a competitive disadvantage (with little evidence that the competition commission has made a difference to competitive practices.

125. **Reforms to strengthen of public administration and the institutional framework will be critical to ensure that policies adopted at the highest level of government are effectively implemented.** Improved governance also means a much-improved Public Private Sector Dialogue, to give more voice to the private sector, and concentrating Government's role to its core public good responsibilities of policy-making and regulation. This means in particular strengthening agricultural producers associations and promoting contractual agriculture within well-coordinated agricultural value chains.

Enabling Business in Agriculture (EBA): Cote d'Ivoire score 2017 (inputs)

Individual Country Results		Côte d'Ivoire
Seed Score (0–100)		60.20
Plant breeding	Plant breeding (0-10)	6.0
Variety registration	Variety registration (0-8)	6.5
	Time to register new varieties (days)	368.0
	Cost to register new varieties (% income per capita)	137.2
Seed quality control	Seed quality control (0-12)	3.0
Fertilizer Score (0–100)		39.29
Fertilizer registration	Fertilizer registration (0-7)	0.0
	Time to register new fertilizer product (days)	N/A
	Cost to register new fertilizer product (% income per capita)	N/A
Quality control of fertilizer	Quality control of fertilizer (0-7)	5.0
Importing & distributing fertilizer	Importing & distributing fertilizer (0-7)	6.0
Machinery Score (0–100)		47.44
Tractor operation	Tractor operation (0-5)	1.5
	Time to register a tractor (days)	N/A
	Cost to register a tractor (% income per capita)	N/A
Tractor testing and standards	Tractor testing and standards (0-8)	6.7
	Time to obtain type approval (days)	18.0
	Cost to obtain type approval (% income per capita)	40.5
Tractor import	Tractor import (0-5)	1.5
Finance Score (0–100)		60.37

Cote d'Ivoire performed above average in the indicators related to the development, registration and quality control of new seed varieties and machinery. The legal framework for Seed benefits from the Bangui Agreement which provides a protection for new seed varieties in the country. The harmonization of seed legislation in the ECOWAS region also facilitates the registration of foreign varieties in Cote d'Ivoire and provides good labeling standards. However, the seed legislations are still lacking a set of national rules to regulate the access to plant genetic resources, and the participation of private sector companies in the seed certification process in partnership with the public sector. Cote d'Ivoire has some of the good practices captured by the Machinery indicator, which measures regulations limiting access and use of agricultural tractors. Nevertheless, reforms related to the implementation of national and international tractor standards as well as in systems to protect tractor operators from injuries are still lacking and would improve the country's performance on this indicator.

AREAS TO IMPROVE: Fertilizer, and agrochemicals are indicators on which Cote d'Ivoire already performed below global averages.

- Despite a reform which improves the application process for phytosanitary certificates, certain good practices are still lacking such as the availability of a list of regulated quarantine pests and the possibility to carry out phytosanitary inspections on a risk-management basis.
- Cote d'Ivoire's performance is the lowest in this indicator which promotes a regulatory environment that properly manages and controls fertilizer quality from the time of import to the moment it reaches farmers. Cote d'Ivoire still lacks a Fertilizer national legal framework to regulate the registration of chemical and organic fertilizer products prior to their commercialization and does not have an official national catalogue listing all fertilizer products sold in the country.

Source: World Bank

5. CONCLUSIONS AND WAY FORWARD

126. **Cote d'Ivoire currently stands at a cross-road for the structural transformation of its agriculture sector.** The agriculture sector has been and will remain a key engine of growth, job creation and poverty reduction over the medium to long term. The entry point for such structural transformation is a development strategy for the country's agri-food system development which encompasses production, logistics, transport, processing, food safety and quality aspects

127. **Maintaining a sustained growth in agriculture will require considerable investments in technology generation/innovation and a much better access to inputs, advisory services.** Addressing the weaknesses of the national research system, and specially of CNRA, should be a priority. In the immediate short term, an in-depth review of the country's national agricultural research and development system, looking at its structure, governance, staffing needs, inclusiveness and regional and international collaboration, should be undertaken. This will feed the finalization of CNRA's new strategic plan preparation. Considering the increasing national and regional demands for food crops and expected shift to higher value and processed products, a special focus should be made on fruits and vegetables, which offer a potential for inclusive growth. In the medium term, support should be provided to roll out and implement the strategic plan.

128. **The development of ICT and e-agriculture systems should be supported to permit the development of information system.** Further support should be provided for further mobile connection penetration in rural areas with low network coverage nationwide. Along the line of the existing food crops market information system and the cashew-specific information system, e-agriculture platforms that will deliver market information and advice on good agricultural practices and climate-smart agriculture should be extended to key agricultural supply chains.

129. **With food safety emerging as an important public health issue in countries in West Africa, the Government should seek the effective implementation of its existing national food system.** In the very short term, the latter need to be updated for less complexity and better coordination among involved institutions. The legal and regulatory framework must be updated to reflect fast changing national and international environment/requirements in terms of food safety issues and standards. In terms of pesticide uses, the national capacity for the effective implementation of the existing regulations should be put in pace and the necessary controls of product quality put in place. Awareness regarding the likely consequences of indiscriminate pesticide use for natural resources should be promoted at farm level through informed farm extensions services. The adoption and implementation of alternative strategies such as Integrated Pest Management (IPM) must be encouraged.

130. **In the long term, the emergence of much needed dynamic secondary cities should be initiated.** Adapting to demographic and economic trends will require means to capture potential benefits from emerging secondary cities. Such entry points would entail supporting the establishment of regional dynamic centers and scale economies needed to unleash the agricultural potential of different agro-ecological regions of the country. Government's new territorial development policy must focus on the design of specific regional development plans and the establishment of industrial zones (*zones économiques intégrées*) in the main regional cities with secured access to land and the provision of all necessary utilities and infrastructures.

131. Promoting the structural transformation of the agricultural sector will require firm political willingness to promoting the emergence of strong interprofessions. Existing “*Conseils*”, especially for Cocoa/Coffee and Cotton/Cashew, should aim at phasing out their operational responsibilities of the value chains. As stipulated in the 2011 Ordonnance, the Government must work towards the effective transfer of operational responsibilities of the value chain to actual interprofessions. In the case of cocoa/coffee and cashew where they do not exist, the priority will be to lay out a short-term roadmap for the strengthening of private actor in these value chains, namely producers associations. Efforts initiated under the PSAC for the cashew and cocoa sector must be revived and brought to completion for the establishment of legitimate producers’ organizations, missing link for the establishment of a true interprofession in both value chains.

132. An adequate transport infrastructure for better access to markets will be a major driver of agricultural development. It is also a major factor in the growth of secondary cities, critical to the development of a thriving rural economy, and of the inclusion of economically lagging areas into the national economy. The rehabilitation of the national road network, and particularly rural roads, should therefore be one of the highest priorities. The government should consider scaling up the innovative approach tested under the PSAC project. Efforts to decentralize to local government levels the decision making in rural roads construction and rehabilitation planning should be pursued. A greater implication of the private sectors in the planning and financing of the maintenance of rural roads network will be more effective in connecting productions zones to main market centers. In parallel to this, major policy measures must be taken to improve overall efficiency of transport services and reduce costs. A strong campaign for the elimination of informal payments and roadblocks should be initiated.

133. Rehabilitating the national Agricultural Education and Training (AET) system would help leverage gains from agricultural productivity and innovation. The Government must invest in upgrading the quality of technical agricultural and develop comprehensive programs covering essential business and behavioral skills as well as practical knowledge. Public AET institutions should be better linked with the private sector to develop adapted curricula and convey skills directly relevant to the demand of the labor markets.

134. Finally Côte d’Ivoire must continue to adopt and implement medium and long term reforms that will contribute to improve the agricultural business environment. This includes transport logistics, access to land, access to finance, the cost and quality of labor and governance issues. All these constraints are also binding on agriculture and agroindustries, in particular logistics and access to land and finance. In addition, policies linked to access to inputs and markets -- trading across borders (delays in clearing goods and the cumbersome customs and transit procedures), sanitary issues, inputs regulations - need to be addressed by the Government.