



Ivory Coast

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Côte d'Ivoire Country Report

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General Country Profile

A. Geography and Population

Ivory Coast, also officially known as the Republic of Côte d'Ivoire (Appendix A1), is located in West Africa. Its capital is Yamoussoukro. The country has a total area of 322,463 sq km (slightly larger than New Mexico), of which 318,003 sq km is land and 4,460 sq km is water. It is bordered by five countries: Burkina Faso, Ghana, Guinea, Liberia, and Mali (Appendix A3).²

There are three primary seasons – warm and dry from November to March, hot and dry from March to May, and hot and wet from June to October. The climate is predominantly tropical along the coastline, whereas to the North, the climate is semiarid.²

One of the notable landmarks in Côte d'Ivoire is Mount Nimba, the highest point in Côte d'Ivoire, located about 1,752 meters above sea level. Other landmarks include major rivers such as the Bandama, Komoe, and Sassandra, which drain the plateau. The major lakes include the Loc de Ebire and Loc de Kossou.²

As of 2019, Côte d'Ivoire has a population of 25.3 million and ranks fifty-third in the world. The current annual growth of the population is 2.51%, down from 2.52% from 2018, with a population density of 166 people per square mile¹⁴. In 2018, about 50.8% of the population lived in an urban setting, whereas 49.2% lived in a rural setting. Most of the population is located in the forested south of the country, whereas the northern savanna is not as populated². The most populated city is a port city called Abidjan, where 4.5 million people live, with an additional 5.1 million individuals living in the metro area. Côte d'Ivoire is the third largest French-speaking country in the world after Paris and Kinshasa (Appendix B1).²

Persons from ages zero to fourteen years old make up about forty percent of the population, while persons from ages fifteen to twenty-four years old make up about twenty percent of the population. Thirty-five percent of the population is aged twenty-five to forty-five years old, four percent of the population is aged forty-five to fifty-five years old, and lastly people sixty-five years and over make up about 2.8% of the population (Appendix A2).²

In 2018, Côte d'Ivoire scored 0.492 on the United Nations Human Development Index Score, in comparison to 0.728 (the world's HDI value). This puts Côte d'Ivoire at the 170th rank out of 189 countries. Since 2017, the HDI increased 26.9%, from a value of 0.388. This is due to a 1.6-year increase in life expectancy after birth, a 3.2-year increase in mean years of schooling, and a 3.1-year increase in expected years of schooling. However, the HDI decreased to 0.311 after adjusting for inequalities.¹¹

B. History and Culture

Côte d'Ivoire became a democratic republic when it was liberated from France on August 7, 1960. After their independence, they still faced political unrest. In December of 1999, the first military coup took place, in which junta leader Robert Guei and his people overthrew the government. When the 2000 elections took place, Guei unsuccessfully tried rigging the election and stepped down when protests broke out. President Laurent Gbagbo took Guei's place. During his time, the military attempted to take over the government again in 2002. From 2002-2003, there was a civil war which resulted in the North being controlled by the rebels, and the South being controlled by the government claiming the south. A buffer zone was kept between the two parts of the country. At this time, the rebels were being led by Guillaume Soro. Around 2007, Gbagbo and Soro dissolved the buffer zone and the rebels became the national armed forces. An election was scheduled to take place in 2007 but was delayed until 2010. In November of 2010, Alassane Dramane Ouattara beat Gbagbo, who did not relinquish power. Another five months of conflict occurred until April 2011, when armed Ouattara supporters escorted Gbagbo out of office with the help of UN and French forces. The UN remained in Côte d'Ivoire until June 2017 to establish peace.²

There are five main ethnic groups: the Mandé group (subgroups – Dan, Yacouba, Toura, Gouro, Malinké, Dioula), the Voltaic groups (subgroups – Sénoufo, Koulango, Lobi), the Krou group (subgroups – Wê, Bété, Christian Bakwé, Godié, and Dida), the Akan group (subgroup – Lagunaires), and the Agni-Baoulé group. Thirty-nine percent of the population is Muslim, thirty percent are Christian, and twelve percent practice Animism.¹⁷

The official language of Côte d'Ivoire is French, and it is spoken by half of the population.¹⁴ There are about sixty native dialects. The most commonly spoken ones are Dioula and Bauolé.^{2,17} English comprehension is relatively limited, but a few universities have made the move to start offering classes in English in an effort to increase English literacy.

It is customary to greet someone with a firm handshake an arm's length away. When holding a conversation with someone for the first time, it is recommended to take care to listen, avoid commenting on the political conflict, and ask a lot of questions about family, as it is a family-oriented culture. Work hours are from seven or eight AM and from two to five PM, with a break from twelve to two PM. To set up a meeting or be invited to a meeting, call ahead or ask someone if you attend the meeting. It is also recommended that you err on the side of dressing up formally and be on time. It is respectful to use "vous" (proper version of "you") for a person one is meeting for the first time, rather than the informal "tu".¹⁰

C. Government and Legal System

As of August 7, 1960, Côte d'Ivoire is considered a presidential republic. The executive branch is headed by the chief of state, President Alassane Dramane Ouattara, and the first vice president elected, Daniel Kablan Duncan. The next election is to be held in 2020.¹⁷

The legislative branch consists of a bicameral parliament, which includes a Senate of ninety-nine seats and the National Assembly. Sixty-six of the ninety-nine members are indirectly elected by universal suffrage. The other thirty-three are appointed by the President. They are responsible for reviewing any proposed laws, which can only pass with a majority vote in each arm of the government.¹⁷

The judicial power is held by the Supreme Court and the Court of Audit. The Supreme Court ensures that the law is being appropriately applied, but the Court of Audit manages any matters having to do with public finances. The Supreme Court is appointed by the President for five-year terms. The Supreme Council of Magistracy assists the President and deals with how the judges rule (i.e. ethics, independence, etc.).¹⁷

The executive branch is managed by the President and Vice President of the Republic and the government. The President serves a five-year term and can only be re-elected one time. They are in charge of the armed forces, Defense, security Councils and Committees, and are responsible for electing the Prime Minister. The current president is Alassane Ouattara, the Vice President is Daniel Kablan Duncan, and the Prime Minister is Amadou Gon Coulibaly.¹⁷

The most recent governance indicators for Côte d'Ivoire was published by the World Bank in 2017. A score between -2.5 (weak) and 2.5 (strong) was given to over 200 countries in six different categories to assess. These are measures of how well the government makes policies, implements them, and the relationship between the government and the people. During the times of political unrest in Côte d'Ivoire (2002-2007), the scores were low, but have improved in each category. Côte d'Ivoire's scores are average to above average in comparison to other countries in the same region (Appendix B2).⁷

D. Economy and Employment

Côte d'Ivoire was ranked 122 among 190 economies in 2019 in terms of ease of doing business, with a score of fifty-eight. Economically, Côte d'Ivoire is one of the forerunners on the continent. Of note, it takes about eight days to start a business, a significant decrease from forty days in 2016 (Appendix A4 & A5).⁷

Côte d'Ivoire's exports include cashew nuts, cocoa, coffee, and oil, in addition to a robust manufacturing industry. Other exports include bananas, palm kernels, corn, rice, cassava, sweet potatoes, sugar, cotton, rubber, and timber. They also partake in gold mining and exporting electricity; however, the country mainly focuses on their agricultural activities for revenue.⁷

Because Côte d'Ivoire is still considered a lower middle income country with plenty of debt, many organizations have reached out to assist the country's economy. The government created a National Development Plan (NDP) that hopes to bring Côte d'Ivoire from a low-income economy to a middle-income economy by 2020. To assist with that goal, multiple donors pledged up to \$15.4 billion in grants and loans. The World Bank Group and International Finance Corporation (IFC) each planned to contribute \$1 billion for investments and loans. World Bank Group also provided funds totaling \$2.48 billion for twenty-three active projects in the country.⁷ The latest gross national income (GNI) is 92.72 billion; GNI per capita is \$3,820, down from \$2,540 in 2016.⁷ In 2016, overall unemployment rate was 6.9%, with adults ages fourteen to thirty-five having a higher rate (9.6%) than those over age thirty-six (3.2%). The last reported annual inflation rate (2017) was 0.686%.¹⁷

In 2017, Côte d'Ivoire's GDP was 97.16 billion, placing the country eighty-sixth in the world. The growth rate of the economy has held steady at 7.6% since 2012 and is projected to remain stable. GDP has continued to increase since 2012 and as a result, the poverty rate has dropped from fifty-one percent to forty-six percent.¹⁷

E. Physical and Technological Infrastructure

Côte d'Ivoire is considered one of the most well-connected countries in Africa. Since 1990, fixed landline usage has increased and is primarily served by 2 providers – Arobase (owned by MTN), and Côte d'Ivoire Télécom. One per one hundred individuals own a fixed line. Since 2017, fixed internet and broadband use has decreased among Ivoirians. However, mobile telecommunication has experienced a significant increase, with 131 subscriptions per hundred inhabitants due to double SIM card usage.² In 2015, 91.23% of the population owned a cell phone and 43.8% of the population used the internet.²⁴

There is a postal service system called La Poste. In 2016, they adopted an address system that allowed citizens to receive mail. This is a shift from the PO box system that was largely inaccessible to the lower and middle class, and difficult to navigate as there were no formal street names. With this new system, the country is divided into a grid of three-meter-by-three-meter squares, and each square is assigned a string of three unique words that will serve as an individual's address and location.

There is an app where citizens can look up addresses to mail to others in the country and other French-speaking West African countries.²¹

Côte d'Ivoire's electricity comes from both thermal and hydroelectric plants, but most of the energy supplied is thermal. As of 2017, there are seven hydroelectric dams and four thermal power stations which run on natural gases sourced by the country itself. The electric power consumption is 276 KWh per capita; energy capacity increased from 1,805 MW in 2015 to 2,199 MW in 2017. While Côte d'Ivoire is energy resource-rich and is able to export to neighboring countries, energy is still expensive and unreliable, due to frequent power outages. However, many changes have been made since 2010, when there was political unrest that indirectly affected electricity supply. Coverage rates have increased fifty-four percent and access rates have increased to eighty-two percent in 2017.¹⁷ As per a recent report from Carnegie Mellon, the country experiences up to 230 average outage hours per year, which is relatively low compared to other Sub-Saharan countries such as Nigeria, Ghana, and Cameroon. About six percent of the grid capacity is supplemented by a backup generator.¹ The government hopes to provide electricity to all villages with greater than 500 individuals by 2020. To defray costs of electricity subscriptions, the government is working to distribute low-electricity-consuming lamps.¹⁷

Côte d'Ivoire has 81, 996 km of roadways of which about 6,502 km are paved.² Road density accounts for about twenty-five km per sq. km of land. Additionally, there are twenty ferry boats and over 300 bridges. A Road Fund and a Road Agency have been established; however, many of the funds and efforts to rehabilitate damaged roads are directed to fixing main roads and urban roads. As a result, the rural roads have had limited repairs over time. About eighty-six million individuals rely on public transport such as busses and rail. About 500 busses have recently been added to the fleet, with future plans to add 2,000 environmentally friendly, larger busses. Additionally, there are plans to extend routes by 130 km from Abidjan. The country already has a 639 km rail that is connected to Burkina Faso, and has one track, except for in Abidjan (dual track). The line has thirty-five stations and eighteen stops. The railway traffic has picked up since the political unrest in the early 2000s, but has not reached its peak yet. There are eight active airports; three are international. Flights from these airports go to six domestic and ten international destinations.¹⁷

In 2007, it was reported that there were sixteen passenger cars per 1,000 people.⁵ According to the Ministry of the Interior in 2014, there were 474, 874 vehicles in Côte d'Ivoire. Eighty-two percent of the cars are estimated to be in Abidjan, which causes serious traffic jams in the city.¹⁵

In terms of access to sanitation and water, about 30% of the population can access basic sanitation. It was also noted that about 47% of the individuals living in rural

areas still practice open defecation instead of in a hygienic facility. About 35% of schools do not have sanitation facilities. About 70% of those living in urban areas have access to water from pipes. When broken down between Abidjan and other urban areas, there is a disparity. Ninety percent of Abidjan has access to water from pipes, a stark difference from 45% of other urban areas.²⁵ Recently, the World Bank announced that Côte d'Ivoire received \$150 million in order to provide safe water sources and hygienic facilities. Their current goal is to reach 1.2 million people in 12 secondary cities. The project will run between July 2019 and April 2021.²⁶

National Health Care Sector

A. National Health Care Profile

The greatest threats to public health in Côte d'Ivoire include malaria, tuberculosis, HIV, and fetal-maternal mortality. The most recent mortality rate reported is 348.8 per 1,000 persons in 2015.¹⁷ In 2017, the government announced that malaria drug treatment should be free in public hospitals; any health centers found trying to sell treatment to citizens would be punished. Additionally, fifty-five vans were made available to distribute malaria treatment to remote villages. For prevention, over fifteen million insecticide-treated mosquito nets have been distributed in 2017 and 2018, with ninety-three percent of households being covered. In March 2019, the Minister of Health announced that 21,299 patients were screened for tuberculosis that year, and there has been a reported eighty-six percent treatment success rate. Ninety-five percent of patients with confirmed cases of uncomplicated malaria have been provided with treatment in 2017, a large increase from sixty-three percent in 2015. The rate of malaria-related deaths dropped from fifteen per 100,000 individuals in 2017 to thirteen per 100,000 in 2018.¹²

Other infectious diseases that Côte d'Ivoire faces include dengue fever (one reported case since 2017), yellow fever, bacterial diarrhea, hepatitis A, typhoid fever, schistosomiasis, rabies, and meningococcal meningitis.²

The last reported mortality rate for tuberculosis was twenty-three deaths among HIV-negative per 100,000 people in 2017 ("*World Health Organization: Côte d'Ivoire*", 2019). Côte d'Ivoire has started a National Tuberculosis Control Program (NTP) in response to the increased TB incidence rates. This program is responsible for screening for undiagnosed TB, especially in the incarcerated population in one of the prisons, MACA. X-rays will be done in 300 suspected cases among 4000 individuals. Côte d'Ivoire now has 315 treatment centers, which equals to one center for every 80,000 individuals.¹²

Côte d'Ivoire is one of the few countries with a high prevalence of HIV, currently at 2.7% for people ages fifteen to forty-nine. In 2016, an estimated 460,000 people were

living with HIV. Of that number, 36,000 of them are children under fourteen. Only forty-one percent of the adults diagnosed with HIV are receiving antiretroviral therapy, and only twenty-five percent of children are receiving proper therapy. About 25,000 adults die yearly from HIV, whereas 2,600 children (ages zero to fourteen) die from HIV (Appendix A6-A9).⁶

High maternal and infant-to-child mortality also remains rampant. According to the Ministry of Health, 614 per 100,000 live births resulted in maternal mortality in 2019. The reported infant-to-child mortality rate was ninety-one per 1,000 infants in 2019. In April 2019, the Ivorian government reported that they will invest 1.6 billion Communauté Financière d'Afrique Francs, or CFAF, as a part of the National Development Plan from 2020 to 2024, in an effort to lower these rates.¹²

In 2016, the life expectancy at birth of an individual was 54.6-years-old, due to limited resources. In 2016, children under the age of five had a mortality rate of 91.8 per 1000 live births while neonates had a mortality rate of 36.6 per 1000 live births.⁶

B. Health System Structure and Policy

The latest information on the number of healthcare facilities within the country are listed below. It is important to note that there is a large concentration of facilities in Abidjan, which is the most populated city. In 2016, the Annual Report on the Sanitary System stated that sixty-eight percent of the population lives within five kilometers of a health facility. Thirty-three percent live more than five kilometers away, and about ten percent live more than fifteen kilometers away.¹²

There are three levels of referral – primary, secondary, and tertiary. The first level consists of health institutions of first contact/Etablissements Sanitaires de Premiers Contacts/ESPC (health centers, specialized health centers, and clinics). The secondary level consists of teaching hospitals and specialized national institutes (general hospitals, regional hospital centers etc.) (Appendix B3).¹²

In some rural areas such as Dimbokro, there are community health workers that follow up with patients after visiting the local health center. Additionally, they have implemented a CommCare referral application in 2017 for community workers. It can be accessed via mobile technology, and will help community workers determine which health facilities their clients will follow-up with.²²

C. Health Service Coverage

Côte d'Ivoire introduced the Couverture Maladie Universelle (CMU) on March 24, 2014 as their newest insurance program. In 2017, there was a pilot phase for 150,000 students which was later opened up to the rest of the population. As of March 2019, 1.8 million individuals and 32,000 indigents were covered. This insurance model was

launched in 2015, when less than five percent of the population was covered with insurance.⁹ Each individual is expected to contribute 1,000 CFAF per person per month, except for those who are low income – they will be covered by the government.¹⁷

While Côte d'Ivoire is taking the necessary steps to improve their healthcare system, hospitals (especially the Abidjan hospitals) are usually at capacity and not well equipped. As per an article in 2017, patients often sat in the emergency departments for as long as forty-eight hours. There is a mortality rate of twenty percent in the emergency departments due to lack of proper equipment. As a result, many people opt to go to private institutions if they have the means. Additionally, many of these hospitals are financially unstable because of increased spending on staff and not enough allotted for upkeep.³

D. Health Care Expenditures – See Appendix A10

E. Healthcare Workforce and Infrastructure

The most recent Annual Report on the Health System in 2017 reported that there was a total of 3,886 physicians, 10, 745 nurses, 4,452 midwives, and 823 pharmacists.¹⁷

During 2019, Côte d'Ivoire has announced many changes that will be made in the health sector. There will be rehabilitation of about fifty hospitals and 600 health centers, for which there will be a budget of 833 billion CFAF. Future plans include construction of 200 first contact health facilities, nine new General Hospitals, six regional hospitals, and a University Hospital Center in Abobo. The Minister of Health announced that there will be an addition of 288 doctors, 1,101 nurses and 743 midwives to the workforce (Appendix B4).¹²

National Radiology Profile

A. Radiology Workforce and Training

Information regarding the radiology workforce in Côte d'Ivoire is limited; however, a study done by Monu, Hewlett & Ostlere¹⁸ demonstrates that there were about sixty radiologists. After extensive searching, it appears that the number of radiologists have not significantly increased. The number of ancillary radiology staff is also limited, but appears to be just as low as the number of radiologists.

In 1989, the Centre International de Formation des Radiologistes d'Afrique Francophone created a Diploma of Specialized Studies/Certificate of Specialized Studies. It is a four-year radiology training program open to any graduates of medicine, especially in Francophone Africa. The four years will be spent rotating through hospitals

in Abidjan (CHU of Trechville, Cocody University Hospital, Yopougon CHU, CHU of Bouaké, Mother-Child Hospital of Bingerville, and Institute of Cardiology of Abidjan). The first year is spent learning basic radiology, second year is spent in specialized radiological examination, ultrasound, and CT, third year is spent in specialized CT and MRI, and the last year in clinical practice at the hospital, with a required dissertation at the culmination of the program. During the 2018-2019 year twenty-three of the thirty-three candidates who successfully completed the program were Ivorian.⁴

A few of the radiological associations that Ivorian radiologists are part of include: the French-Speaking African Society of Radiology (SRANF) and the Ivorian Society of Medical Imaging (affiliated with European Society of Radiology). The Ivorian Society was recently established in 2018.

B. Equipment and Distribution

A large portion of the population is located in the metro area of Abidjan; therefore, many radiology services are concentrated in that region (Appendix A11). Listed below is the last reported available radiological equipment from 2014. There appears to be at least two functional units, one at Polyclinique Farah and the other at the Mother and Child Hospital in Bingerville, both private institutions.

In 2014, there were 0.69 CT units and 0.15 MRI units per million individuals. Further breakdown demonstrates that there are three MRI units that are all within the private sector, four CT units in the public sector, and ten CT units in the private sector. There were no PET or linear accelerators (Appendix B5).⁶ In 2016, it was reported that forty-three percent of health districts do not offer radiology services in the public hospitals. Eighty-four public hospitals have radiology departments, while fourteen have non-functional radiology departments. Twenty, or 24.1% do not have a radiology department. Within the sixty-three health districts, thirteen of them have at least one non-functional radiology department.¹⁶

The first national radiotherapy center in Côte d'Ivoire was opened in Cocody, Abidjan on January 25, 2018, after an investment of 13.614 billion CFAF. It is equipped with medical oncology, pharmacy, and laboratory services, staffed by both Ivorian and Moroccan medical teams. This center is set to serve up to 160 to 200 patients per day.²³ As of February 5, 2019, they had served 1,404 patients and admitted 298 patients for radiotherapy. It is currently equipped with a simulator scanner and two linear particle accelerators.¹²

The Hospital and University Center (CHU) of Treichville, which was recently updated, now houses one sixty-four slice CT scanner, one remote controlled table, eight x-ray machines, five Doppler ultrasound scanners, four digital x-ray units, and two mobile radiology units.¹²

Additionally, the first 1.5T MRI installed in all of Côte d'Ivoire is at the Polyclinique Farah, located in the town of Marcory. This made cardiac, pulmonary and abdominal MRI available, which is something that was not done prior. The MRI is also equipped with a monitor, so that patients that are intubated or ventilated can also be served. This radiology department also has a remote controlled radiology table (also the first in the country) and a digital mammography unit.²⁰ Most radiology departments have PACS capabilities and some have the ability to participate in teleradiology and send images to outside physicians, such as the Polyclinique Farah. There are local manufacturers where medical institutions can purchase radiology equipment (i.e. mammograms, CT tables, mammography units etc.) such as Icomed Imaging.

C. Radiology Regulation and Policy

A group called the Radiation, Safety, and Nuclear Security Authority (ARSN) was established in 2013 after the creation of a law that mandated education about nuclear safety. While it is not fully functional yet, the authority is taking steps to establishing radiation protection training. In 2017, radiation protection was taught to technicians and first year radiologists. A team of five radiologists, one nuclear physician, and two senior imaging technicians taught a five-hours course about radiation safety and the importance of dosimeters, especially those working in the interventional radiology department. Additionally, guidelines were put in place for radiation exposure to patients for head and chest CT in one center, and mammography in one public institution.¹⁹

Conclusion

In summary, Côte d'Ivoire has relatively reliable resources for sustainable imaging, especially in the urban areas. While the rural areas appear to have less resources at this time, the government has implemented many projects and programs to make these areas equally functional. Once these areas are properly equipped, Côte d'Ivoire would be well on its way to full sustainable imaging.

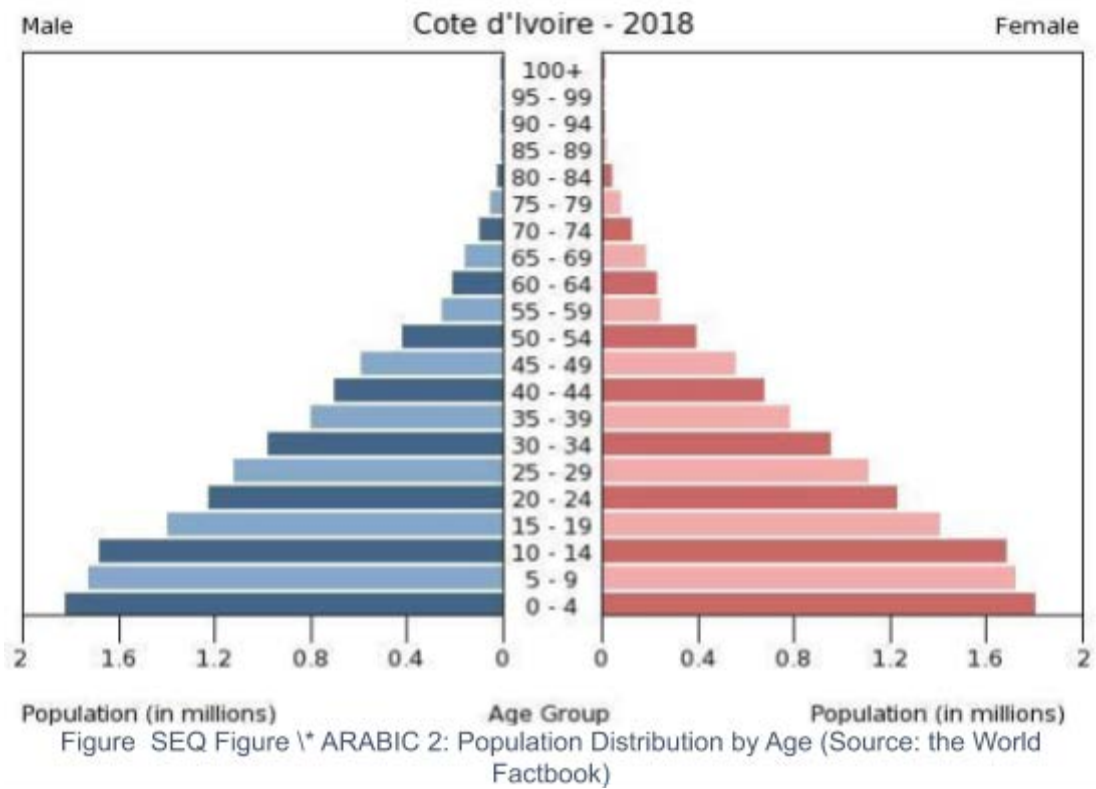
Appendix A

1.



Figure SEQ Figure * ARABIC 1: Flag of Côte d'Ivoire
(Source: the World Factbook)

2.



3.



Figure SEQ Figure * ARABIC 3: Map of Côte d'Ivoire (Source: alamy.com)

4.

Rankings on Doing Business topics - Côte d'Ivoire

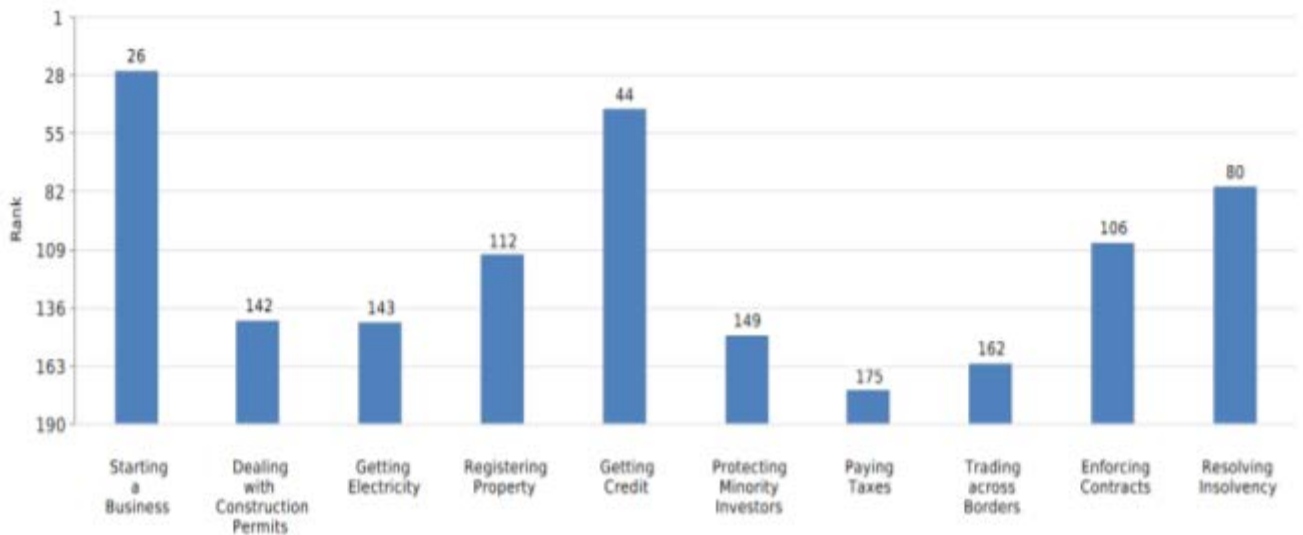


Figure 4: World Bank Ease of Business Category Scores (Source: the World Bank)

5.

Ease of Doing Business Score on Doing Business topics - Côte d'Ivoire

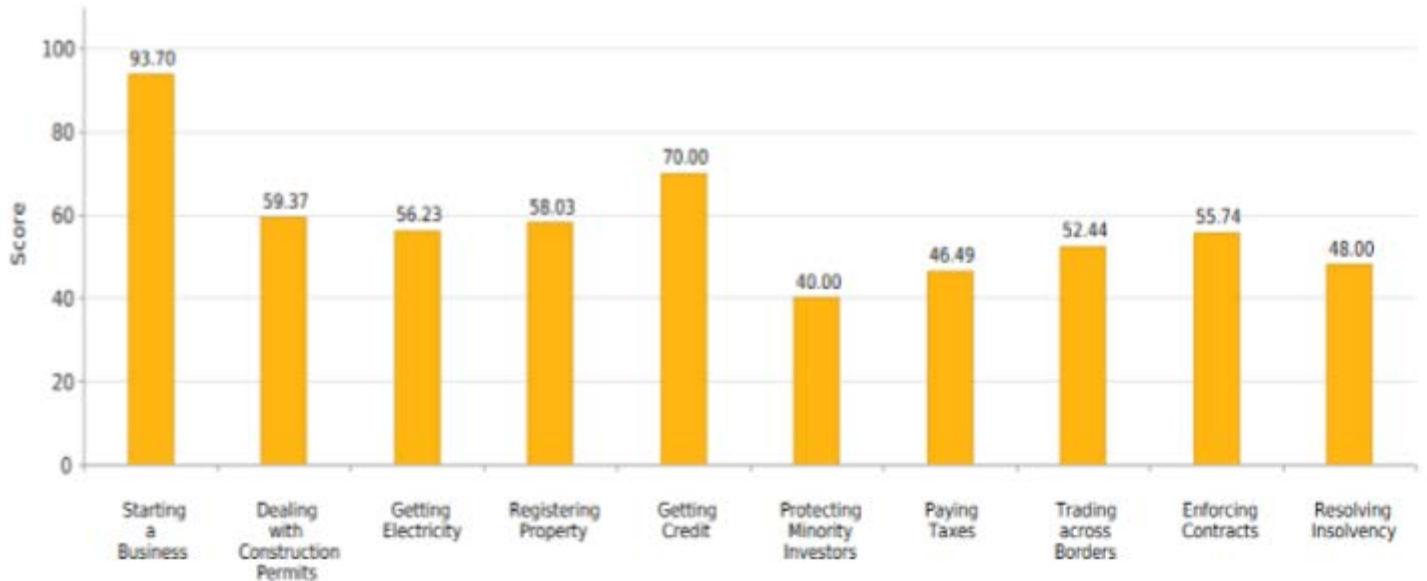


Figure 5: Ease of Doing Business Scores (Source: The World Bank)

6.

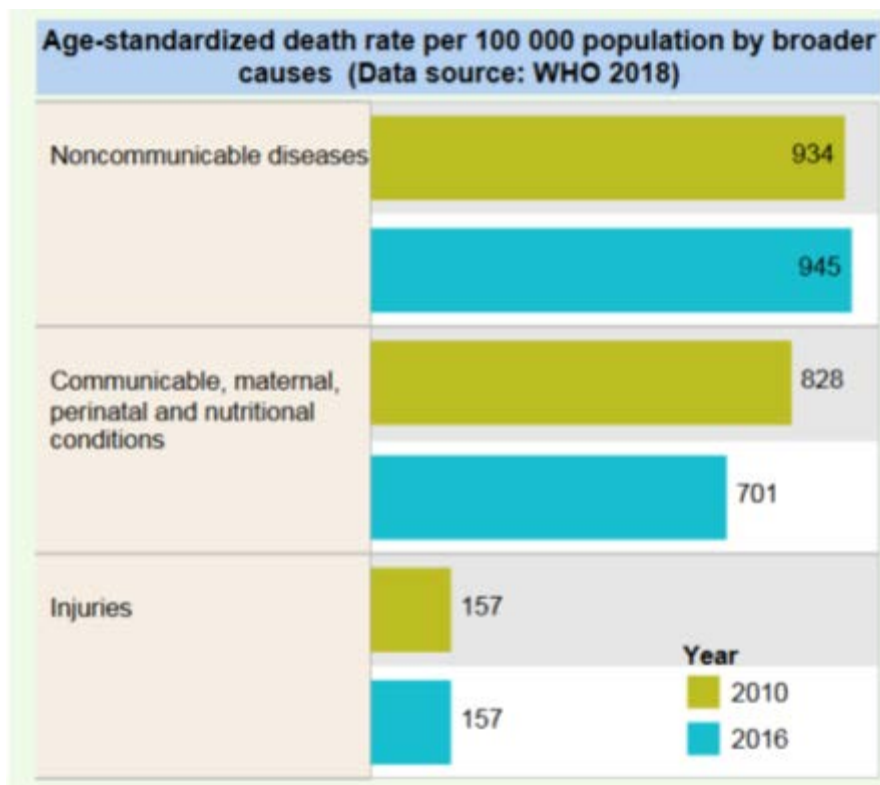


Figure 6: Age Standardized Death per 100,000 (Source: WHO 2018)

7.

Age-standardized death rate per 100 000 population by communicable diseases groups (Data source: WHO 2018)		
	2010	2016
Infectious and parasitic diseases	509	394
Respiratory Infectious	186	184
Neonatal conditions	74	66
Maternal conditions	37	33
Nutritional deficiencies	23	24

Figure 7: Age-standardized death rate per 100,000 by communicable diseases (Source: WHO 2018)

8.

Age-standardized death rate per 100 000 population by noncommunicable diseases groups (Data source: WHO 2018)		
	2010	2016
Cardiovascular diseases	452	458
Digestive diseases	124	115
Malignant neoplasms	102	103
Respiratory diseases	65	65
Diabetes mellitus	55	58
Genitourinary diseases	46	49
Neurological conditions	39	42
Congenital anomalies	16	18
Endocrine, blood, immune disorders	17	18
Mental and substance use disorders	7	8
Skin diseases	5	5
Other neoplasms	4	4
Musculoskeletal diseases	2	2
Oral conditions		
Sense organ diseases		

Figure 8: Age-standardized death rate per 100,000 by noncommunicable diseases (Source: WHO 2018)

9.

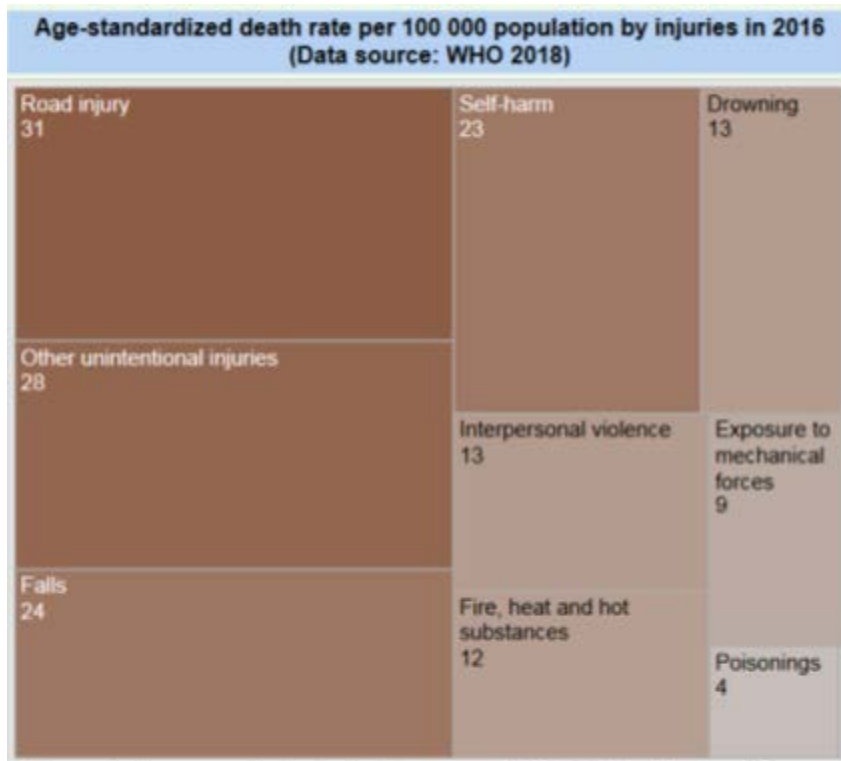


Figure 9: Age-standardized death rate per 100,000 by Injuries (Source: WHO 2018)

10.

Health care expenditure indicators***	
Expenditure ratio	
Total expenditure on health as % of GDP	5.7% ↑ avg. low-income countries (5%) ↓ global avg. (9.2%)
Level of expenditures	
General government expenditure on health as % of total government expenditure	8.5% ↓ targets set by Abuja Declaration (15%)
Selected per capita indicators	
Per capita total expenditure on health (PPP int.\$)	172
Per capita government expenditure on health at average exchange rate (US\$)	29
Per capita government expenditure on health (PPP int.\$)	57
Sources of funds	
General government expenditure on health as % of total expenditure on health	33.1%
Private expenditure on health as % of total expenditure on health	66.9%
External resources for health as % of total expenditure on health	7.7%
Out-of-pocket expenditures as % of private expenditure on health	76.5%

Note: WHO aggregates are calculated using absolute amounts in national currency units converted to Purchasing Power Parity (PPP) equivalents

Figure 10: Côte d'Ivoire Health Care Expenditures in 2016 (Source: USAID)

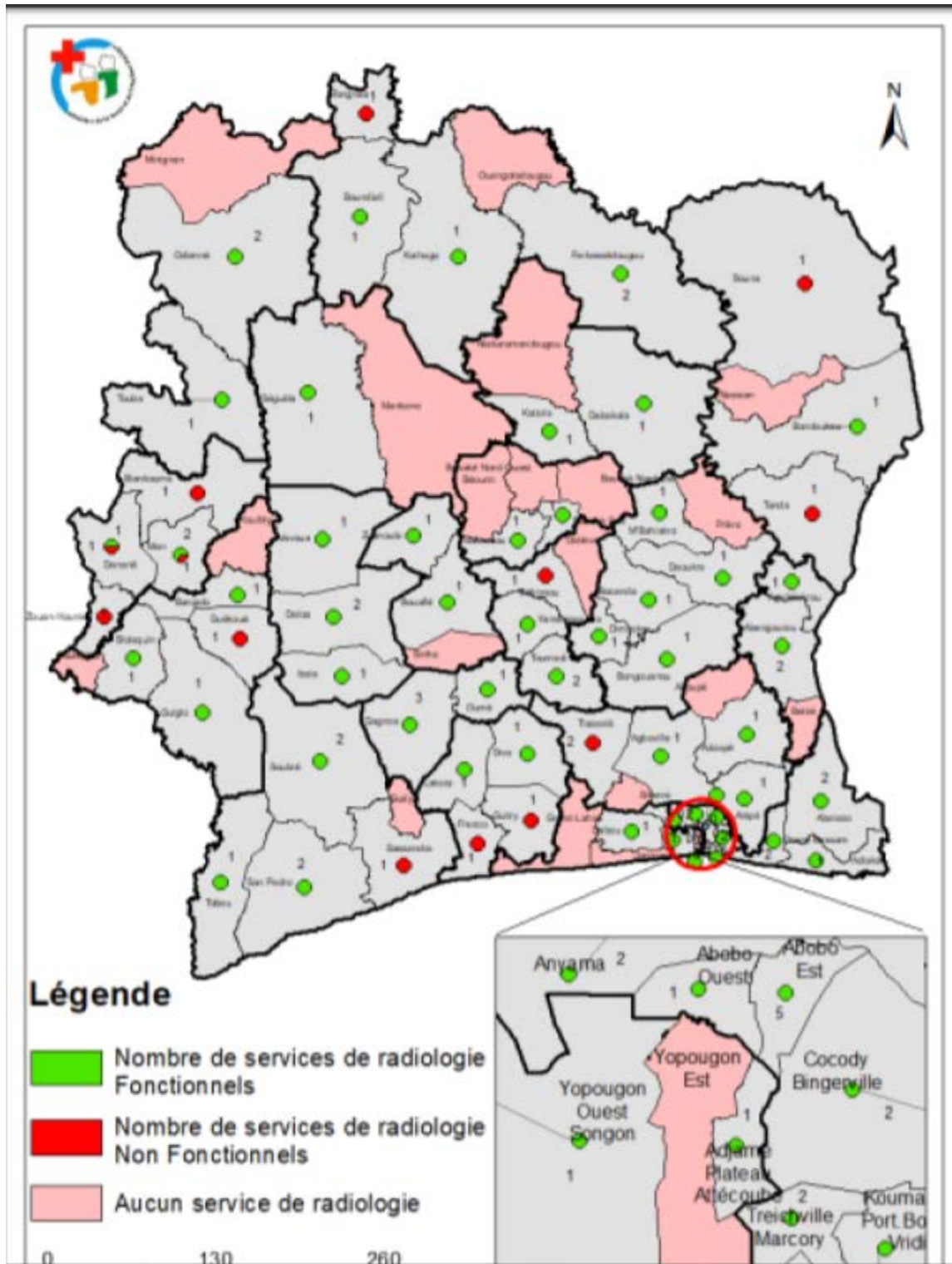


Figure 11: Distribution of Radiology Services (Source: Ministère de la santé et de l'hygiène publique)

Appendix B

1.

Year	Population	% Male	% Female	Density (km ²)	Population Rank	Growth Rate
2019	25,531,083	50.57%	49.43%	79.18	53	2.51%
2018	24,905,843	50.61%	49.39%	77.24	53	2.52%
2017	24,294,750	50.66%	49.34%	75.34	54	2.53%
2016	23,695,919	50.70%	49.30%	73.48	54	2.54%
2015	23,108,472	50.75%	49.25%	71.66	55	2.52%
2010	20,401,331	51.02%	48.98%	63.27	57	2.16%
2005	18,336,303	51.27%	48.73%	56.86	57	1.90%
2000	16,686,561	51.60%	48.40%	51.75	55	2.79%
1995	14,540,820	51.76%	48.24%	45.09	57	3.46%
1990	12,267,754	51.92%	48.08%	38.04	57	3.71%
1985	10,222,558	52.11%	47.89%	31.70	61	4.27%
1980	8,293,675	52.10%	47.90%	25.72	71	4.65%
1975	6,608,609	51.96%	48.04%	20.49	75	4.74%
1970	5,242,395	51.62%	48.38%	16.26	79	3.94%
1965	4,321,791	51.45%	48.55%	13.40	87	3.96%
1960	3,558,988	51.06%	48.94%	11.04	92	3.28%
1955	3,029,303	50.84%	49.16%	9.39	92	2.87%
1950	2,630,131	50.69%	49.31%	8.16	94	0.00%

Table 1: Population Data and Growth Rate (Source: World Population Review)

2.

Governance Indicators	Score (1996)	Score (2005)	Score (2017)
Voice & Accountability	-0.58	-1.29	-0.27
Political Stability & No Violence	0.03	-2.26	-1.09
Government Effectiveness	-0.26	-1.32	-0.74
Regulatory Quality	-0.40	-0.90	-0.36
Rule of Law	-0.79	-1.48	-0.63
Control of Corruption	-0.26	-1.24	-0.52

Table 2: World Bank Governance Indicators 2017 (Source: The World Bank)

3.

Healthcare Facility	Public Sector (from 2018)	Private Sector (from 2014)	Total
First-Contact Facilities (primary)	1,964	813	2,777
General Hospital (secondary)	84	250	334
Regional Hospital (secondary)	17	11	28
Specialized Hospitals (secondary)	2	---	2
University Hospitals (tertiary)	4	---	4
Specialized National Institutes (tertiary)	5	---	5
National Public Institutions (tertiary)	4	---	4

Table 3: Number of Healthcare Facilities (Source: Prospectus 2018 & African Health Observatory)

4.

Healthcare Workforce (2016)	
Healthcare Personnel	Amount
Physicians	1 per 10,000 inhabitants
Nurses	1 per 5,000 inhabitants
Midwives	2.3 per 3,000 women of childbearing age
Pharmacists	66.91 per million inhabitants

Table 4: Healthcare Personnel (Source: Prospectus 2018 & CIOFF)

5.

Equipment (from 2014)	Amount (per million population)	Public Sector Units	Private Sector Units
Mammography Units	(not calculated)	2	-
Computed Tomography Units	0.69	4	10
Gamma Camera/Nuclear Medicine	0.00	-	-
Linear Accelerator	0.00	-	-
MRI Units	0.15	0	3
PET	0.00	-	-
Radiotherapy Units	(not calculated)	1	-
Telecobalt Unit	0.00	-	-

Table 5: Radiological Equipment (Source: African Health Observatory)

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