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Dear Professor Dickson:

Please find attached my analytical report on the water crisis in the Ivory Coast. I choose this topic because my parents are living in the Ivory Coast, and I had the privilege of visiting the country twice. I found the country's history, and its recuperation after the war, fascinating.

The Ivory Coast suffered from political crisis for a decade, causing many deaths and wounded, along with enormous material damage. Seeing how the country got back on its feet only five years after the end of the war is worthy of admiration. The treatment of water has improved in a significant manner.

To write this report, I interviewed Ivorians citizens and residents, that were able to describe the situation during the war, and the differences they see today. Their testimony touched me, since their descriptions of the war and the obstacles they had to face were heartbreaking. Leslie Brossier's testimony was particularly moving, since she was very detailed. She also send me pictures she took during the Battle of Abidjan, and her story was terrifically interesting. I also used many African and French newspapers as my sources, since they followed the events that happened in the country more closely than american newspapers.

This project allowed me to learn more about the Ivory Coast's history. It also made me want to extend this research. Indeed, I would like to interview more people about their experience during the political crisis, and maybe write a report on the civil wars that happened in the Ivory Coast, and the civilians' perspective on it.

If you have any questions regarding my report, please contact me.

Sincerely,

Carlota Bonnet

### **Abstract**

The Ivory Coast, or Côte d'Ivoire, suffered many years of political crisis, resulting on poor water management. However, through hard work, planification, and investments, the country was able to improve significantly the water quality.

Indeed, in 2011, only two thirds of the Ivorian population had access to drinking water. The long-lasting political crisis and the high levels of poverty caused the water treatment and infrastructures to lower in quality. A majority of people had to walk long distances to get water; water that wasn't even treated. However, the water purification system today is very efficient, allowing the population to drink tap water without fear of sickness or parasites. Moreover, the distribution system also improved, since the French company Bouygues invested in new infrastructures to allow everyone to access water. Even if today's situation is not perfect, it improves day after day.

The purpose of this report is to expose the political crisis —and the resulting water crisis — the Ivory Coast faced from 2002 to 2011, and the rebuilding to country had from 2011 to present. Côte d'Ivoire has proven to be a hard working country, able to grow back from its ashes. In a few years, the Ivory Coast could be the leader of the African continent.

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## Introduction

For most Americans, "Africa" rhymes with poverty, sadness, dirt, and water pollution. However, the Ivory Coast is a strong example of how prejudices can lead to misconceptions about our world. The Ivory Coast, or Côte d'Ivoire, is a western african country that faced a civil war from 2002 to 2011 (see fig.1 and fig. 2). These years of political crisis, coupled with high levels of poverty, caused the deterioration of the water infrastructures, and the pollution of the water itself. For many years, the habitants of Côte d'Ivoire didn't had access to clean water, let alone drinking water. It was only in 2011, when President Ouattara was elected, that the country was able to start re-building itself. Today, the vast majority of the population has access to drinking water at an affordable price.



Fig. 1: "Ivory Coast in Africa" (*Operation World*).



Fig. 2: "Ivory Coast" (*Centers for Disease Control*).

To understand the water crisis of Côte d'Ivoire, we must understand the civil war that happened periodically from 2002 to 2011 and its impact on the country, as well as the living conditions during that time. Furthermore, we need to explain how the recovery of the country allowed the improvement of the water purification and distribution among the population. Lastly, we will explore the current situation and what enhancements can be expected in the years to come.

## **I) Gbagbo years: the war**

### *a) Political facts*

After its independence in 1960, the Ivory Coast was a rare prolific country in a very poor and isolated Africa. Its main incomes came from exporting natural resources like cacao, coffee, and even natural gas ("La Côte D'Ivoire, Premier Producteur Mondial De Cacao"). However, after the death of the President Félix Houphouët-Boigny in 1993 (that had been in power since 1960), the country falls into a less peaceful state. Hostilities between the northern Muslims and the southern Catholics appear. The Catholics believed the Muslims weren't real Ivorians. Important tensions emerge, as Catholics want to apply the concept of "ivoirité" (the belief that only some ethnicities and religions were true Ivorians) to prevent Muslims from being Ivorian citizens (Braeckman; Danfakha). These tensions are amplified by the soon-to-be President Henri Konan Bédié. He uses the concept of ivoirité to proclaim that his main opponent, Alassane Ouattara, does not meet the conditions to be a valid presidential candidate ("Ouattara Apatride!"). The tense state of the country only grew during President Bédié's electoral mandate, and facilitated the *coup d'état* orchestrated by the military forces in 1999 and lead by General Robert Guéi ("24 décembre 1999"). In 2000, Laurent Gbagbo wins the presidential elections (Phythian). Even if the country is in a democracy, rebels are still present in the North of the country.

In September 2002, rebel soldiers coming from the neighboring country Burkina Faso try a new coup d'état. The situation quickly becomes a conflict between the South (held by the government) and the North (held by the rebels). The rebels are opposed, among other things, to the "ivoirité" concept, that had been developed since 1999, and was even more severe against "false" Ivorians ("19 septembre 2002"). The streets become battlefields as the country falls into

civil war. In 2003, peace accords are signed (Ben Yahmed), but the truce only lasts a year, as the confrontations start again in 2004 (Mari and Marmoz). They will last until 2011, with a brief interruption from 2007 to 2010. The legal mandate of President Laurent Gbagbo was scheduled to end in 2005; however, he delayed the elections six times to stay in power. It is only in 2010 that the elections take place ("Nouvelle Crise Politique En Côte D'Ivoire"). It is the first time in ten years that the country hosts a presidential election. Alassane Ouattara wins the elections with 54% of the votes against Laurent Gbagbo (Naudé), but he later negates the results, declaring them invalid ("Côte D'Ivoire : Le Camp Gbagbo Refuse Tout Partage Du Pouvoir").

Among others, former President of France Nicolas Sarkozy and President of the United States Barak Obama declare Ouattara president, and urge Gbagbo to surrender ("Côte D'Ivoire : Sarkozy Aux Côtés De Ouattara"). However, Gbagbo refuses to leave the power, establishing himself in Abidjan (the economic capital) instead of Yamoussoukro (the political capital.) Ouattara decides to defend his claim of the presidency, using arms if necessary ("Côte D'Ivoire : Le Camp Gbagbo Refuse Tout Partage Du Pouvoir"). New violent conflicts ensue from this, creating a murderous and violent civil war. Once again, the North is opposed to the South. This time the rebels have a cause; they want Ouattara to claim its rightful place as President. In March 2011, Abidjan is surrounded by the pro-Ouattara forces (RFI; see fig. 3). After ten days of war on the streets of Abidjan, in what is now referred to as "The Battle of Abidjan," Laurent Gbagbo is arrested ("La chute de Laurent Gbagbo"). Alassane Ouattara is officially proclaimed President of the Ivory Coast in May 2011 ("Ouattara devient officiellement président de la Côte d'Ivoire").



Fig. 3: "La situation en Côte d'Ivoire" (RTL). In March 2011, Yamoussoukro (the political capital) was in Ouattara's control, and that Abidjan was completely surrounded by Ouattara's forces.

*b) Life during the war and access to the water*

During the "Gbagbo years" (before 2011), water cut-offs were frequent (Brossier). In 2012, only 62% of the population had access to water (Issouf). The tap water was supposed to be safe for consumption. However, in our interview, Leslie Brossier, an habitant of Abidjan, declared, "The tap water was drinkable only in certain areas, and sometimes the water was brown for a few minutes, so we knew we couldn't drink it." Indeed, the Unicef states that from 2000 to 2007, a portion of the Ivorian population was getting sick due to the lack of treatment for the water, and the presence of Guinea Worms (Unicef). Moreover, cut-offs were frequent and could last days, weeks, or even months in certain areas (Mérrouze). As stated by Mérrouze in 2011, "the habitants . . . [were] forced to run the streets looking for water, source of life, with a can on their heads to avoid having to resign themselves into drinking rain water." Also in 2011, a young student declares, "We can't study anymore, we sleep badly. We are forced to walk very far to get

water, so we are exhausted" (qtd. in AFP). Another woman explains, "the children are sick because they can't sleep. But there is also a lack of hygiene" (qtd. in AFP). These lack of access to water are caused by a large deficit in water infrastructures, since the many years of war and political crisis prevented the country from receiving investments (Konan). Moreover, the existing infrastructures were neglected for more than a decade, while the population only grew, creating an even bigger gap between the supply and the demand of water (Konan; Mérouze).

## **II)After the war**

### *a) Re-building the country*

When President Ouattara takes the power in 2011, the Ivory Coast is damaged. The post-electoral war caused more than three thousand deaths, and many wounded, in addition to uncountable material damages (Micael). The economical situations is uncertain, and the recuperation promises to be long and tedious. Abidjan, the economical capital, is "on the edge of an humanitarian crisis" ("Côte d'Ivoire: réconciliation et sécurité, vaste programme pour Ouattara"). As soon as he is proclaimed President, Alassane Ouattara urges the country to stay peaceful, and to avoid any form of retaliations (Larcher). Furthermore, 4,400 billion of CFA francs (7 billion US dollars) were lost during the war, and the cacao exportations —the country's main source of income— were stopped (Bax and Graeme). Thus, Ouattara proposes an emergency plan of 45 billion CFA francs (78 million US dollars) to help straighten out the economy (Larcher). However, Ouattara is not worried about the economical recovery, as he knows it will succeed with the time. He explains, "Reconstructing, it's not the hardest part . . . but obtaining peace and reconciliation after what we lived for years, it's more complicated" (Larcher). Indeed, President Ouattara wishes to punish the culprits using legal

means, the commission of "Truth and Reconciliation" (L'Express). However, this commission will not be as successful as expected. The citizens deplore the lack of decision they have in it. Moreover, the remaining fractures of the society and the still present armed attacks make this commission unproductive (Lopes).

Despite the relative failure of this commission, the country will slowly rebuild itself. Foreign enterprises, like Bouygues or Carrefour, invest in the construction of infrastructures (Adélé). The French company Bouygues is one of the biggest actors in the Ivory Coast's rebirth. Indeed, the company invests in various sectors: natural gas, roads, bridges, sewage systems, water infrastructures, etc. The CEO Martin Bouygues declared, "[Bouygues and its subsidiaries] will be available partners of the Ivory Coast, who is in significant economical growth, and needs infrastructures" (qtd. in Mieu.) One of the main achievement of the Bouygues Construction subsidiary in Côte d'Ivoire is the construction of the "third bridge," officially named "Henri Konan Bédié" (Mieu). The bridge costed 190 million euros (215 million US dollars), and was inaugurated in December 2014 (Mieu; Carré and Bouloc). Thanks to the bridge, citizens of Abidjan can now save more than one hour of travel when crossing the lake that divides the city (Mieu). The Bouygues family also invested in natural resources, through the their company Foxtrot International (Bonnet). This company owns two offshore platforms, producing 50% of the electrical power of the country (Bonnet; Energie Voice). One of the platform, Marlin, was built in 2015. Its ressources are expected to last at least ten years, probably more, as new oil reservoirs near the platform have been found in the past year (Foxtrot International). These investments made by the different companies to re-built the country also include the construction of new water infrastructures.

*b) New water infrastructures*

In 2011, President Ouattara proposes the "National Plan for Development 2012-2015," in which he proposes, among other things, to "improve significantly the access to drinking water, and the cleaning of water in both urban and rural areas" (qtd. in Issouf). To achieve this, projects had to be planned. Only to supply Abidjan, twelve major projects were realized (Issouf). Today, 82% of Côte d'Ivoire's habitants have access to tap water, that can be consumed safely (Issouf; "L'eau potable"; see fig. 4).

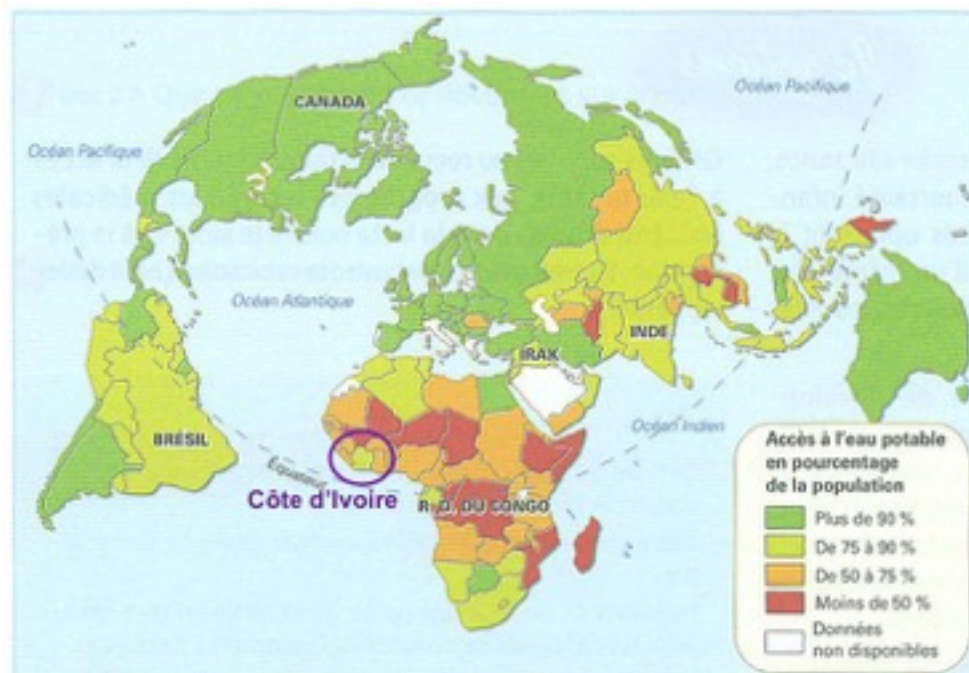


Fig. 4: "L'accès à l'eau potable" (*Apollon*). This map is from 2013, and we can see that more than 75% of the Ivory Coast's population has access to drinkable water (purple text added for this report).

Mr. Bi You, a lower-class Ivorian citizen, explains, "during the Gbagbo years, the water was polluted, but today, if you pay for your subscription, you have clean drinking water." Indeed, SODECI (Society of Water Distribution in the Ivory Coast) treats the water distributed in the country very carefully. The groundwater has an usually good bacteriological quality, so it only

receives a minimum treatment. The river and dam water, however, need much more treatment. First, the bigger materials floating in the water are separated from the water itself. Then, the water is filtrated on fine sand, eliminating the remaining floating particles. Lastly, the water is disinfected and treated with calcium and chlorine (SODECI). Miss. Brossier explains that after the war, "the water improved sector after sector, even if it needed time (about 2-3 years after the war) for everyone to get good accessibility to water." However, she knows everything isn't resolved yet, as she adds, "I'm not sure that the poor sectors are well-served in water. I think they still go to rivers, oceans, to get water." Even if the majority of the population is satisfied with their water supply, some citizens still have difficulties accessing water.

### **III)Current situation: improvements still needed**

Even after the construction of new infrastructures in the country, the water problem isn't totally resolved. Indeed, 20% of the population (mostly from the North of the country) remains without access to drinking water, and they are usually the portion of the population unable to afford bottled water (Issouf; La Banque Mondiale). They are forced to walk long distances to find water fountains, since cut-offs are still frequent in some towns (Adélé). For example, the town of Dinaoudi, in the north-east of the country, the population still lack access to drinking water (AIP). However, the government plans to improve their system in order to allow everyone in the country to have access to drinking water (Issouf). President Ouattara, reelected in 2015, declared that he would install more infrastructures in order to promote the access to clean water (Adélé).

Though the access of drinking water is improving, another issue exists, since many Ivorians are unable to pay for the water subscription. According to the World Bank data, 46.3% of the population lives under the country's poverty line (La Banque Mondiale). In 2015, this poverty line was 737 CFA francs (1.3 US dollars) per day, or 22,478 CFA francs (39 US dollars) per month (Ministère du Plan et du Développement). The high percentage of people under the poverty line prevented many families to pay the 130,000 CFA francs (200 US dollars) for the water subscription every month (APA). However, on March 2015, President Ouattara announced that thirty thousand families would only have to pay 30,000 CFA francs (52 US dollars) for the water subscriptions. He explained, "this social decision will allow the population to access drinking water," and added that the government was still investing to improve the water infrastructures in the country (APA).

## **Conclusion**

The Ivory Coast is a western african country that have faced many years of civil war. During the ten years of political crisis, the infrastructures of the country were neglected. Because of this, at the end of the war in 2011, the water system was very damaged. Less than two thirds of the population had access to water, and the water itself wasn't treated properly. However, foreign companies like Bouygues invested to build new infrastructures. The water treatment and distribution improved exponentially, and today the vast majority of the country has access to drinkable water. Even if some issues remain, the Ivory Coast has proven to be capable of progress and improvements. In a few years, it might be the most powerful country in Africa.

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