

**THE INSTITUTIONAL EVOLUTION OF THE ENVIRONMENT
SECTOR IN THE DEVELOPMENT PROCESS IN
CÔTE D'IVOIRE**

By

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**Thesis Submitted in Partial Fulfillment of the Academic
Requirements for the Award of Master's Degree in Development
Studies.**

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DECLARATION

I, **DJIPROH Brah Maria Félicia Bérénice**, hereby declare that this Thesis entitled: **The Institutional Evolution of the Environment Sector in the Development Process in CÔTE D'IVOIRE** is my original work and has not been presented to any other institution.

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Signature:.....

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APPROVAL

The present Thesis entitled: **The Institutional Evolution of the Environment Sector in the Development Process in CÔTE D'IVOIRE** fulfilled all the academic requirements for the award of Master's Degree in Development Studies at Kigali Independent University ULK.

Dr. BAHIZI MARCEL, PhD

Signature:.....

Date:...../...../.....

DEDICATION

To my parents;

To my family.

ACKNOWLEDGMENTS

At the end of my Master's Degree at Kigali Independent University ULK, my sincerest gratitude goes to the Glorious God. I would also like to thank the Founder and President of ULK **Prof. Dr. RWIGAMBA BALINDA** and the entire team of lecturers, administrative staff who have accompanied me on this program with documents and guidelines.

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ABBREVIATIONS, ACRONYMS AND SYMBOLS

ADB:	African Development Bank
ANADER:	Agence Nationale d'Appui au Développement Rural Côte d'Ivoire Normalisation
CODINORM:	Centre National de Recherche Agronomique Centre de Recherches en Ecologie
CNRA:	Centre de Recherches Océanologiques Direction des Études, de la Planification et des Statistiques
CRE:	Institut National de la Statistique et Des Études Économiques Laboratoire National d'Appui au Développement Agricole
CRO:	Laboratoire National d'Essais de qualité de Métrologie et d'Analyses
INSEE:	Master in Development Studies Ministère de l'Environnement et du Développement Durable de Côte d'Ivoire
LANADA:	
NGOs:	Non-Governmental Organizations
OECD:	Organization for Economic Co-operation and Development
OIPR:	Office Ivoirien des Parcs et Réserves
SDGs:	Sustainable Development Goals
SODECI:	Société de distribution d'eau de la Côte d'Ivoire
SODEXAM:	Société d'Exploitation et de Développement Aéroportuaire
ULK:	Université Libre de Kigali
UNEP:	United Nations Environment program
WB:	World Bank
WWF:	World Wildlife Fund

ABSTRACT

This research project focuses on the institutional evolution of the environmental sector in Côte d'Ivoire, spanning from 1954 to the present day. The objectives of this study turn around the determination of the impact of the environment sector on socio-economic development in Côte d'Ivoire; the analyse of the political-administrative history of the environment sector in Côte d'Ivoire and the determination of the level of development in Cote d'Ivoire due to the institutional evolution of the environment sector. The research question is succinctly framed around the importance of the sector and its role in national progress. The study employs a mixed-methods approach, utilizing both quantitative and qualitative analyses. The target population comprises the economic capital, Abidjan of 5 616 633 inhabitants like our target population from whom a sample size of 385 participants were selected, with stratified random sampling. The chosen analytical method involves data analysis and processing, employing comparative and historical techniques alongside editing, tabulation, and coding. The results clearly show that the sector studied, thanks to its programs and public policies, represents an important part of the Ivorian economy, protecting and promoting natural resources while contributing to the well-being of the population. However, the sector faces limitations due to negligence and inadequate policies. The study implicates political authorities and citizens of Côte d'Ivoire for these challenges. Practically, this research emphasizes the necessity of proactive policies and responsible citizenship to enhance the productivity of the environmental sector in Côte d'Ivoire. The study highlights the social implications of environmental negligence, emphasizing the collective responsibility of political authorities and citizens in shaping the future of Côte d'Ivoire. This research contributes to the existing body of knowledge by providing a comprehensive analysis of the institutional evolution of the environmental sector in Côte d'Ivoire, shedding light on its impact on national development. The limitations of this research lie in the focused exploration of the environmental sector in Côte d'Ivoire. Generalizability may be affected by the specific context of the chosen region. Implications include the need for comprehensive policies and heightened citizen engagement.

Keywords: *Environmental sector, Côte d'Ivoire, socio-economic development, political-administrative development, institutional evolution.*

CHAPTER 1: GENERAL INTRODUCTION

1.0. Introduction

This section introduces the subject of our future analyses: the institutional evolution of the environment sector in the development process in Côte d'Ivoire. It includes the context of the study, the problem statement, the research objective and the research questions. It also includes the scope of the study, the importance of the study and the research methodology followed by the literature review.

1.1. Background of the study

The Stockholm Conference in June 1972 put environmental issues on the international agenda and marked the beginning of a dialogue between industrialized and developing countries on the link between economic growth, pollution of the global commons (air, water, oceans) and the well-being of people around the world (Engfeldt, 2009). This conference demonstrated that with leadership and listening to the concerns of all, cooperation on environmental and sustainable development issues is possible. Since the conference, environmental issues are better analyzed, a body of law and national ministries are established (Chasek & Sherman., 2004). This conference gave rise to three major series of decisions ratified by all the member countries, including Côte d'Ivoire.

Côte d'Ivoire is a West African country with a surface area of 322,462 km² with a population of 29,389,150 inhabitants. It has its own definition of the environment: it is the set of physical, chemical, biological elements and socio-economic, moral and intellectual factors likely to have a direct or indirect, immediate or long-term effect on the development of the environment, living beings and human activities, as defined in Law No. 96-766 of 3 October 1996 on the Environment Code. The country officially set up its first Ministry of the Environment in 1954 under the name of Ministry of Agriculture with Mr. Roger HOUDET

as Minister. It has experienced high economic development with a growth rate of more than 7% per year between its independence in 1960 and the 1980s, often called the "Ivorian miracle" (Halle & Bruzon., 2006). This is due to a policy favoring the development of agricultural export crops, notably coffee, cocoa, cotton, palm oil and the installation and investment of international companies (Douzo & Koubo, 2003).

The formulation of the study leads to an in-depth analysis at the administrative, legal and factorial levels. The term administration has two definitions, one broad and one narrow. In the broad sense, the Administration is defined as a container, a structure within which individuals at different levels of hierarchy evolve, and whose statutes, powers and acts fall under the restricted definition (Benjaminsen & Tor, 2012). At this level, it is therefore necessary to specify the profile, attributions and achievements of the various structures that are an integral part of the environmental sector in Côte d'Ivoire.

Citing a legal level in the environmental field would mean specifying the context in which the rules were drawn up, their objectives and the roles assigned. In fact, several actions have been taken by the Government of Côte d'Ivoire at both urban and rural levels to inform the population, raise awareness and finance environmental projects (Dogore & Guisso, 2007).

1.2. Problem's statement

Lot of researches on environment in African countries highlights various aspects. Sustainable development, factors influencing development, environmental challenges, trade effects, and governance are all key areas of research in understanding the relationship between the environment and the development of African countries.

One study aims to examine the sustainable development of African countries in public life and the reduction of negative environmental impacts (Tsai & Li, 2021). The study explores the potential challenges and opportunities associated with sustainable development in African countries.

Another research paper suggests that manufacturing value-added, urbanization, financial development, and foreign direct investment have a positive influence on the development of West African countries (Radoine & Bajja, 2022). The paper highlights the importance of these factors in promoting economic growth and development.

Furthermore, it is evident that African countries face a wide array of environmental problems that pose a major threat to their people (Walker, 2005). For example, activists in Kenya and South Africa have played a leading role in advocating for climate justice. These environmental issues can hinder the development process and impact the socio-economic well-being of the region.

One study focuses on the effect of trade on CO₂ emissions in Sub-Saharan African countries (Adams & Opoku, 2020). The main objective of this research is to examine the relationship between trade activities and carbon dioxide emissions in African countries, shedding light on the potential environmental consequences of trade.

Moreover, the governance of African countries plays a crucial role in their economic development. Poor governance has been identified as a factor contributing to poor economic development in Africa and in countries like Gabon, Democratic Republic of Congo, Central African Republic, Namibia, Madagascar, Angola, Botswana, Cameroon, Mali and Cote d'Ivoire (Yang, Bashiru Danwana, & Issahaku, 2022). Weak rule of law and institutions are often reflective of the challenges faced in achieving sustainable development in the region.

Several key conclusions and insights have emerged from these studies. One important finding is that sustainable development (SD) has increasingly played a significant role in government policymaking across the world, including African countries (Tsai & Li, 2021). Governments have recognized the importance of integrating environmental considerations into their policies to ensure long-term economic growth and social well-being.

Access to energy is a crucial factor in promoting development in African countries. By expanding access to energy, particularly through green development initiatives, African nations can enhance their economic growth and improve the quality of life for their citizens. Investing in renewable energy sources and promoting energy efficiency can contribute to sustainable development and mitigate the negative impact of climate change.

The harmful health effects of metals, pesticides, and dietary mold represent a unique context in Africa. Studies have highlighted the need for comprehensive research and interventions to address these specific health challenges. By understanding and addressing these issues, African countries can improve the well-being and overall development of their populations.

Africa is undergoing both an environmental and an epidemiological transition. Household air pollution, primarily caused by indoor cooking and heating methods, is a significant form of air pollution in African countries. This form of pollution has adverse effects on health, particularly for women and children. Efforts to reduce household air pollution and promote cleaner cooking and heating technologies are crucial for sustainable development and improving public health in Africa.

African countries face unique challenges in coping with environmental risks due to weak institutional, technical, and financial capacities. Strengthening these capacities is essential for effective environmental management and sustainable development. Building resilient institutions, enhancing technical expertise, and mobilizing financial resources are key strategies to mitigate the impact of environmental risks and promote development in African countries.

These previous analyses show the scope of the environmental issue and, consequently, the urgent need to assess the impact of the environmental sector on Cote d'Ivoire's development through its institutional evolution.

1.3. Objectives of the study

The objectives of this study consists of general objectives and specific objectives.

1.3.1. General objective

The general objective of this study is to investigate and comprehensively understand the institutional evolution of the environment sector in Côte d'Ivoire within the context of its development process.

1.3.2 Specific Objectives

For a better organization of the work, the specific objectives are mentioned:

- i. To determine the impact of the environment sector on socio-economic development in Côte d'Ivoire.
- ii. To analyze the political-administrative history of the environment sector in Côte d'Ivoire.
- iii. To determine the level of development in Côte d'Ivoire due to the institutional evolution of the environment sector.

1.4. Research questions

In a bid to attain the objective of the study, the following research questions are posed:

- i. To what extent does the environment sector have an impact on socio-economic development in Côte d'Ivoire?
- ii. How the political-administrative and legal system influences the environmental sector in Côte d'Ivoire?
- iii. What is the level of development in Côte d'Ivoire due to the institutional evolution of the environment sector?

1.5. Scope of the study

Any analysis needs to be done on well-defined parameters to structure and limit the research for a quality result. This is the scope of the study. This scope includes temporal scope, geographical scope and domain scope.

1.5.1 Time scope

The research was formulated around the impact of the environment sector in the development of Côte d'Ivoire between 1954 and 2023. We need to find data from 1954 because, officially, the country set up its first Ministry of the Environment in 1954 under the name of Ministry of Agriculture. Moreover, since, no academic document has carried out such an analysis of the Ivorian environment sector.

1.5.2 Geographical scope

The searches, although was carried in Abidjan, the economic capital of Côte d'Ivoire. Because, this economic capital is home to the majority of environmental institutions, and where environmental initiatives and programs are most widespread.

1.5.3 Scope in domain

The modules learned during my Master's degree in development studies such as Environment and Sustainable development, Development policy and planning and Governance and Development was a vital importance in the conduct of research.

This study is positioned as an analysis and evaluation of one sector in particular in Côte d'Ivoire, the environment sector. It can easily list the actions undertaken in this sector that have contributed to the country's development. It is a reminder of the importance of monitoring and evaluation in the effective adjustment of public policies.

1.6. Significance of the study

The originality of this paper lies in the value of the data transmitted and processed in collaboration with the Directorate of Studies, Planning and Studies (DEPS) of the Ministry of the Environment, where we had the honor of doing an internship.

In the logic according to which any sector in a country is supposed to participate actively in the development of the territory, this study is important insofar as it will make it possible to establish the administrative, legal and factorial advances of the environment sector in the development of Côte d'Ivoire.

This study will also be a support of analyses necessary to the evaluation of the course carried out and to the identification of the challenges to be taken up for the benefit of the Ivorian government, the Ministry of the Environment and Sustainable Development of Côte d'Ivoire (MINEDD) and the unions. All external technical and financial partners such as the African Development Bank (ADB) and the World Bank (WB) will also be able to use this data for better collaboration.

This analysis will also be of great use to future researchers who will want to conduct studies whose relevance will be based in part on the interpretation of the data we provide.

1.7. Organization of the thesis

The study is organized and presented in five chapters:

The first chapter is entitled **General introduction**, and give the background of the study, the problem statement, objectives of the study and questions, the scope and significance of the study and organization of the thesis. The second chapter is entitled **Literature review**, and present the conceptual review, theoretical framework, and theoretical review. To finish with empirical review, conceptual framework and gap analysis. Chapter three which is entitled **Methodology**, dealt with the methodology used in conducting the research like research design, target population, sampling size and sampling techniques, data collection techniques,

data analysis methods, and data processing tools. Chapter four, which is entitled **Presentation and discussion of the findings**, focus on the research results, analysis and interpretation of the collected data. These results were edited and interpreted in relation to the objectives of the study. Chapter five is entitled **Summary of the findings, conclusion and recommendations**, and dealt with the summary, conclusion and recommendations of the study.

CHAPTER 2: LITERATURE REVIEW

2.0. Introduction

In this section, the researcher highlighted the conceptual and theoretical review, framework and empirical review with the dependent and independent variables. In this way, it was easy to draw conclusions to the above-mentioned analyses through empirical investigations focused on the coverage, context, timing and methodology existing in the literature and specify those on which the research was focus.

2.1. Conceptual review

This section focuses on the concepts that determine the trajectory of this analysis.

2.1.1. Institutional evolution

Institutional evolution refers to the process by which political institutions are created, changed, and adapted over time. It involves the study of how these institutions develop, as well as the factors that contribute to their evolution.

One aspect of institutional evolution is the role of individuals in shaping and transforming political institutions. Individuals have their own preferences and assumptions, which influence the creation and modification of institutions (Blyth, Hodgson, Lewis, & Steinmo, 2011). They play a vital role in designing social institutions intentionally, which distinguishes institutional evolution from biological evolution (Steinmo, Lewis, & Sven, 2012).

Another aspect of institutional evolution is the coevolution between institutions and other societal traits. This suggests that there are functional relationships between different aspects of societies that enable their mutual development and adaptation (Currie, et al., 2021). Institutions can coevolve with other institutions and culture, influencing and being influenced by each other (Currie & Thomas, Evolution of institutions and organizations, 2017).

Furthermore, institutional evolution is a historical process, where new institutions emerge or are created in response to new needs and challenges. These new institutions can reinforce or replace existing ones, shaping the political landscape over time (Greif & Bioecon, 2014).

Overall, the study of institutional evolution seeks to understand how political institutions change, adapt, and interact with other aspects of society. It encompasses the role of individuals, the coevolution of institutions with other traits, and the historical development of new institutions.

2.1.2. Environmental sector

According to the (INSEE) Institut National de la Statistique et des Etudes Economiques (InstitutNationalde la Statistique et des Etudes Economiques, 2014) a sector groups together manufacturing, trading or service companies that have the same main activity (according to the nomenclature of economic activity considered). The activity of a sector is therefore not entirely homogeneous and includes secondary production or services that would fall under other items of the nomenclature than that of the sector under consideration. On the other hand, a branch groups together homogeneous production unit.

The *environment* is "all the elements (biotic or abiotic) that surround an individual or a species and some of which contribute directly to its needs or "all the natural (physical, chemical, biological) and cultural (sociological) conditions likely to affect living organisms and human activities." The notion of natural environment, often referred to by the single word "environment", has evolved a great deal over the last few centuries and particularly over the last few decades. The environment is understood as all the natural components of the planet Earth, such as air, water, atmosphere, rocks, plants, animals, and all the phenomena and interactions that take place there. That is to say, everything that surrounds Man and his activities; although this central position of the human being is precisely an object of controversy in the field of ecology.

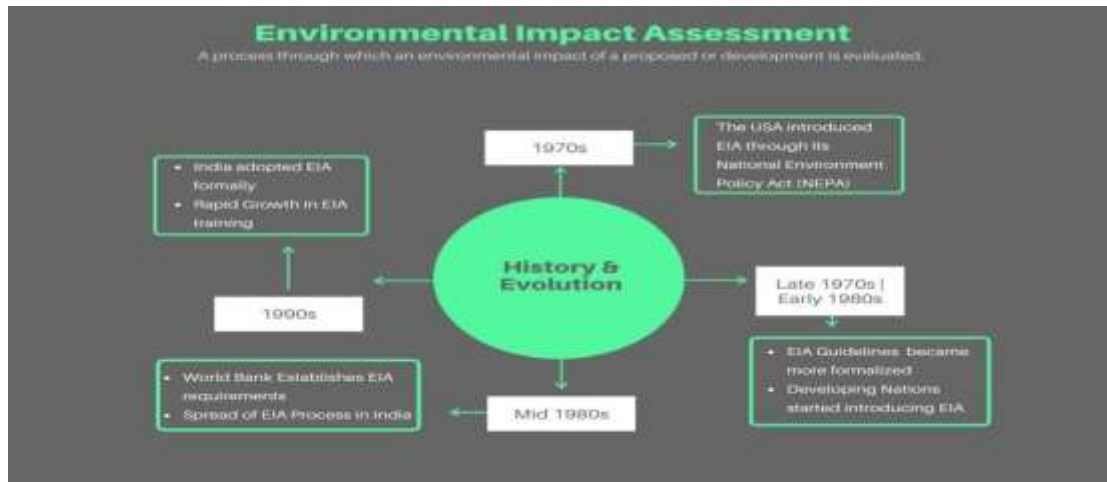
In the 21st century, the protection of the environment has become a major issue, at the same time as the idea of its degradation, both global and local, due to polluting human activities, has been imposed. The preservation of the environment is one of the three pillars of sustainable development. It is also the 6th, 13th and 14th of the seventeen (SDGs) Sustainable Development Goals, considered by the United Nations as "crucial to the success of the other goals set out in the Millennium Summit Declaration".

The environmental sector encompasses various industries and organizations that are dedicated to the protection and preservation of the environment. Here is a comprehensive list of different industries and organizations that are part of the environmental sector:

- i. **Renewable Energy Industry:** This industry focuses on generating energy from renewable sources such as solar, wind, hydro, geothermal, and biomass. Companies involved in manufacturing and installing solar panels, wind turbines, and other renewable energy systems contribute to this sector.
- ii. **Waste Management and Recycling:** This sector deals with the proper management, disposal, and recycling of waste materials to minimize their environmental impact. It includes waste collection, treatment facilities, recycling plants, composting, and hazardous waste management companies.
- iii. **Water and Wastewater Treatment:** Organizations involved in water treatment, purification, and wastewater management are an integral part of the environmental sector. This includes companies responsible for treating and distributing clean drinking water and managing sewage treatment plants.
- iv. **Environmental Consulting:** Consulting firms specializing in environmental assessment, impact studies, and sustainable development provide valuable expertise to both public and private sectors. They help organizations understand and comply with environmental regulations and best practices.

- v. **Conservation and Wildlife Organizations:** Non-profit organizations and government agencies focused on conserving natural habitats, protecting endangered species, and promoting biodiversity fall under this category. Examples include national parks, nature reserves, and organizations like the World Wildlife Fund (WWF) and the Sierra Club.
- vi. **Environmental Education and Research:** Academic institutions and research organizations play a crucial role in advancing environmental knowledge and developing sustainable solutions. Universities, research institutes, and think tanks dedicated to environmental studies and research contribute significantly to the sector.
- vii. **Sustainable Agriculture and Forestry:** Organizations promoting sustainable farming practices, organic agriculture, agroforestry, and sustainable forestry are part of this industry. They work towards reducing chemical inputs, preserving soil health, and promoting sustainable land use practices.
- viii. **Environmental Technology and Innovation:** Companies developing and manufacturing eco-friendly technologies, green products, and solutions to address environmental challenges are essential in the environmental sector. This includes companies producing energy-efficient appliances, electric vehicles, and pollution control devices.
- ix. **Environmental Advocacy and Policy:** Non-governmental organizations (NGOs) and advocacy groups that work towards influencing environmental policies, raising awareness, and promoting sustainable practices fall under this category. They play a crucial role in shaping environmental regulations and advocating for conservation and sustainability.
- x. **Ecotourism and Sustainable Hospitality:** This sector focuses on promoting responsible travel, minimizing the environmental impact of tourism.

Figure 1: Environmental impact assessment



Source: Ministry of plan and Development Côte d'Ivoire, 2023

2.1.3. Development

Etymologically, the word *development* comes from the Latin *de*, from the prefix of cessation, negation, and from *velare*: to veil, cover, envelop. The notion of development appeared at the end of the Second World War with the decolonization movement initiated by *India in 1947*. At the UN, Truman (President of the United States) called on rich countries to help the development of poor nations. The notion of underdeveloped countries thus appeared.

The concept of *development* refers to all the technical, social, territorial, demographic and cultural transformations that accompany the growth of production. It reflects the structural and qualitative aspect of growth and can be associated with the idea of economic and social progress. In simple terms, development is the action of growing, progressing, expanding, becoming more complex over time. Development implies, in addition to growth, a better satisfaction of basic needs (food, health, education), a reduction of inequalities, unemployment and poverty, as François Perroux has shown.

It aims at increasing social wealth. But, insofar as any sustainable accumulation of productive capital (buildings, equipment, for example) presupposes the involvement of adequate human resources, development requires a better consideration of basic needs.

We cannot close these remarks by underlining that the word "development" is henceforth linked to the expression "sustainable development" which is concretely, a way of organizing society in such a way as to allow it to exist in the long term. This implies taking into account both present and future imperatives, such as the preservation of the environment and natural resources or social and economic equity. The "official" definition of sustainable development was first elaborated in *the Brundtland Report in 1987*. This report was the synthesis of the first UN World Commission on Environment and Development. (Commission Mondiale sur l'Environnement et le Développement, 1987).

2.2. Theoretical review

This section focus on the most important theories in chronological order concerning institution and development, such as the traditional approaches, the Northian visions and the evolution of the Northian vision itself.

2.2.1. Traditional theories of institutional change: violence and social arrangement

Introductions to the traditional theory of institutional change generally focus on the work of Commons and Veblen. These two authors have been chosen for their undisputed contributions to the field. In this respect, Bazzoli affirms Commons as the second great figure of American institutionalism after Veblen Chavance (Institut National de la Statistique et des Etudes Economiques, 2014) also points out that Veblen was one of the major figures in the study of institutional economics.

For Commons (1950), violence and conflict are simply manifestations of the different interests of political forces seeking to control the evolution of society.

Compared to Veblen (1909), Commons (1950) had a somewhat gentler approach to conflict. Veblen opposed social and private utility, while the Commons defended collective and socio-economic life rather than purely individualistic life. any society, according to the commons are a set of arrangements for securing transactions. These different transactions guarantee different interests for the participants in the transaction. A large number of economic interests weaken selfish desires, and these desires can lead to violent confrontation in the process of institutional change. The House of Commons' approach was political and could therefore have been avoided by a simple compromise of political groups seeking to safeguard their own interests.

Veblen (1909) developed an approach to institutional change based on conflict and tension. For Veblen, society is characterized by inertia and institutional obsolescence. Veblen used the industrialization processes of Germany and Japan to show that the beneficiaries of traditional technologies were hostile to the adoption of new technologies as a means of asserting their power. The archaic structure is defended or protected by those with vested interests. Economic agents disadvantaged by the existing institutional form therefore seek an institutional innovation that will improve their disadvantaged position. Institutional change pits the proportion of society that benefits from the existing institutional form, on the one hand, and the underprivileged class seeking new institutional arrangements. Taking into account scientific progress, technological change technological change, and conflicts and tensions, is generally a way out for the protagonists. Depending on circumstances, change can be more or less violent, according to Veblen.

The contribution of the institutionalist current to the theory of institutional change can be structured into three approaches. (1) According to Veblen, conflict over change can result from a confrontation between social classes, while Commons analyzes the conflict in a purely political conflict in a purely political sphere. (2) Institutional change is the result of confrontations between economic and political institutions. (3) The individual needs of economic agents living in a capitalist social system is likely to be capitalist social system is likely to lead to change.

2.2.2. Douglas North and institutional change: a dynamic of evolving thought evolutionary thinking

Douglas North was a prominent economist and Nobel laureate known for his work on institutions and economic history. His ideas have had a significant impact on the study of how institutions evolve over time. Here is an analysis of his theory and its connection to evolutionary thinking:

Institutional Change as a Dynamic Process: Douglas North's central premise is that institutions are not static but dynamic entities. They change and evolve over time in response to external factors and internal dynamics.

He argues that institutions are the rules of the game in a society, encompassing both formal rules (laws, regulations) and informal rules (norms, customs). These rules shape individual behavior and economic outcomes.

Transaction Costs and Institutions: North emphasizes the role of transaction costs in shaping institutions. Transaction costs refer to the costs associated with making economic exchanges or transactions. Institutions are created to reduce these costs and facilitate economic activity.

For instance, property rights and contract enforcement mechanisms are essential institutions that reduce uncertainty and transaction costs, thereby promoting economic exchange.

Path Dependency: One key aspect of North's thinking is the idea of path dependency. He argues that historical events and initial institutional choices can have a lasting impact on a society's institutional trajectory. Institutions tend to persist even if they are suboptimal because changing them involves high transition costs. This can lead to the path dependence of institutional development.

Evolutionary Thinking: Douglas North's approach can be seen as aligned with evolutionary thinking. Institutions evolve through a process of variation, selection, and retention.

Variation occurs as different societies develop unique institutions in response to their specific circumstances. Selection happens as institutions that are more effective at reducing transaction costs tend to survive and spread. Retention involves the persistence of successful institutions over time.

Policy Implications: North's work has practical implications for policymakers. He suggests that policymakers should consider the historical and institutional context when designing economic policies.

Attempts to impose new institutions without understanding the existing ones and the path dependency can lead to unintended consequences.

Critiques and Debates: It is important to note that North's ideas have been subject to criticism and debate. Some argue that his focus on transaction costs may overlook other important factors in institutional change.

Additionally, the application of his theories to specific cases can be complex, as real-world institutions often involve a mix of formal and informal rules.

In conclusion, Douglas North's theory of institutional change, rooted in the study of transaction costs, path dependency, and evolutionary thinking, has been influential in understanding how institutions evolve over time. It provides valuable insights for

economists, historians, and policymakers in analyzing and addressing the dynamics of institutional change.

2.2.3. Extensions of the Northian theory of institutional change

Douglas North's work on institutional change has been influential in economics and political science. Several scholars have extended and built upon North's ideas. Here is an analysis of some of these extensions:

Institutional Change as a Path-Dependent Process: Many scholars extended North's theory by emphasizing path dependence. They argue that historical events and initial conditions heavily influence the direction and pace of institutional change. Institutions tend to persist and adapt rather than change radically because actors are constrained by existing rules and norms.

Power and Conflict in Institutional Change: Some extensions focus on power dynamics and conflicts in the process of institutional change. They argue that changes in institutions often involve conflicts among different interest groups.

The role of political actors, elites, and interest groups in shaping institutions is highlighted.

Institutions and Economic Development: Another important extension is the link between institutions and economic development. Scholars like Daron Acemoglu and James A. Robinson, in their book "Why Nations Fail," build upon North's ideas to argue that inclusive institutions are key to sustained economic growth. They distinguish between extractive and inclusive institutions, with the latter being conducive to development.

Cultural and Cognitive Dimensions: Some extensions delve into the cultural and cognitive dimensions of institutional change. They argue that institutions are not just formal rules but also involve shared mental models and cultural beliefs. The role of culture in shaping and changing institutions is explored.

Global and Comparative Perspectives: North's theory was initially applied in the context of individual countries. Extensions involve applying his framework to global and comparative analyses, considering how international institutions and globalization impact domestic institutions.

Behavioral Economics and Bounded Rationality: Some scholars incorporate insights from behavioral economics and bounded rationality into North's framework. They argue that individual decision-makers may not always act rationally, and this can have implications for institutional change.

Policy Implications: Lastly, extensions often discuss the policy implications of North's theory. How can policymakers facilitate positive institutional change? What role should international organizations play in promoting good governance and inclusive institutions?

In conclusion, the extensions of the Northian theory of institutional change have enriched our understanding of how institutions evolve and shape societies. These extensions have explored various dimensions, from power dynamics to culture and cognition, and have important implications for both academic research and policy-making.

2.3. Empirical review

This section present original research reports on the impact of the institutional evolution of the environment sector in certain countries, notably in Cote d'Ivoire. There are several relevant research reports on the impact of the environmental sector on the development of countries.

One study found that economic development has a positive influence on green growth, meaning that as countries develop economically, they are more likely to prioritize and invest in environmentally sustainable practices (Tawiah, Zakari, & Adedoyin, 2021). Another study suggests that the level of economic development and environmental factors have different

mechanisms that influence life expectancy in countries (Chen, Ma, Hua, Wang, & Guo, 2021).

The Organization for Economic Co-operation and Development (OECD) provides data, research, outlooks, and country reviews on various environmental aspects such as biodiversity, water management, resource and waste management, and climate change. These reports assess the economic impacts of environmental policies (OrganizationforEconomicCo-operationandDevelopment, 2021).

Finally, the World Bank emphasizes the importance of addressing the drivers of environmental degradation and loss of nature for achieving green, resilient, and inclusive development. They provide an overview of the role of natural resources in the development process (WorldBank, 2012).

The selected research reports provide valuable insights into the impact of the environment on the development of countries.

The United Nations report, presents a snapshot of current and future climate trends and their associated impacts on the economy and sensitive sectors like agriculture. It emphasizes the need to understand these trends in order to effectively address the challenges posed by climate change (UnitedNations, 2023)

In the World Bank report, the focus is on countries' ability to seize growth opportunities, assess pollution costs and climate risks, and identify synergies. It highlights the importance of understanding these factors in order to make informed decisions regarding economic growth and environmental sustainability. The sustainable management of the environment and natural resources is emphasized environment as vital for economic growth and human well-being. The report emphasizes the benefits of effectively managing renewable natural resources and the potential positive impacts on various aspects of society (WorldBank, 2023).

According to Zhao and Madni Report (2021), the impact of institutional reforms on environmental performance in developing countries. The research question aims to assess how these reforms affect the environmental outcomes in these countries.

The latest United Nations reports on -poor-and-vulnerable-countries-need-support-to-adapt-to-climate-change emphasizes the need for all countries, regardless of their economic status, to adapt to climate change. It references a recent report by the United Nations Intergovernmental Panel on Climate Change, which highlights the importance of supporting poor and vulnerable countries in their efforts to adapt to the impacts of climate change (United Nations, 2022)

Overall, these research reports provide a comprehensive understanding of the impact of the environment on the development of countries, highlighting the need for effective management, adaptation to climate change, and the role of institutional reforms. After analyzing original research reports on the impact of the environmental sector on country development, the findings reveal several important aspects.

Firstly, it has been observed that countries with a strong focus on environmental sustainability tend to experience more sustainable development. This is evident in the form of increased investments in renewable energy sources, effective waste management systems, and conservation of natural resources. These measures not only contribute to environmental protection but also promote economic growth and social well-being.

Furthermore, the research reports highlight the positive correlation between environmental policies and economic development. Countries that prioritize environmental protection and invest in green technologies have witnessed a boost in employment opportunities, innovation, and overall economic progress. By shifting towards a greener economy, these countries have managed to reduce their dependence on fossil fuels, mitigate climate change impacts, and enhance their competitiveness in the global market.

Additionally, the reports emphasize the significance of environmental education and awareness in driving sustainable development. Countries that prioritize environmental education programs and initiatives have observed a greater level of public participation and engagement in environmental conservation efforts. This has led to the adoption of eco-friendly practices at the individual and community levels, contributing to the overall development of the country.

Some reports about the fact that Cote d'Ivoire is various environmental institutions are numerous, and each plays a decisive role in protecting and promoting the environment.

At the first rank of the followers of the sector, it is quote:

The Ivorian Ministry of the Environment: It was created for the first time in 1954, and today, it is called Ministry of Environment and Sustainable Development (MINEDD). The Ministry is organized according to a very precise scheme: We have today, 01 Cabinet, 02 General Directorates, 13 structures attached to the Cabinet, 07 central Directorates, 03 sub-tutorial structures, 33 regional Directorates.

This entity has (o2) two main missions on the Ivorian territory, under the environment and under sustainable development.

In the second rank, of the actors of the environmental sector in Côte d'Ivoire, we will quote the Ministries and structures of State.

The Ministry in charge of Defense: It contributes to the animation and the general coordination of the governmental action, including that relating specifically to the protection of the environment and the promotion of sustainable development.

The Ministry in charge of the Interior: It ensures the involvement of the territorial and local authorities (Communes, Districts, etc.) that depend on it. Decentralization is giving local and territorial authorities an increasingly important role in environmental management. It

participates in the management of natural disasters in conjunction with the Ministry in charge of the Environment.

The Ministry in charge of Foreign Affairs: It collaborates with the Ministry of Health, Environment and Sustainable Development in the definition and implementation of sub-regional, regional, bilateral and multilateral cooperation sectoral policies, in the ratification of international conventions and in the execution of the schedule of conferences in the field of health, environment and sustainable development.

The Ministry in charge of Planning and Development.

It initiated a national prospective study which led to the definition of the conditions of sustainable development in Côte d'Ivoire.

The Ministry in charge of Economy and Finance: It assists the Ministry of Sanitation, Environment and Sustainable Development in setting up the macro-economic framework of the sanitation, environment and sustainable development sector.

The Ministry in charge of the Budget: It assists the Ministry of Health, Environment and Sustainable Development in developing budgetary and fiscal policies for the health, environment and sustainable development sector.

The Ministry in charge of Industry and Mines: It ensures, in relation with the Ministry of Health, Environment and Sustainable Development, the respect of the national legislation. In terms of inspection of classified installations, environmental evaluation, development of infrastructures and technologies for the protection of the environment and promotion of sustainable development as well as the application of the mining code.

The Ministry in charge of Economic Infrastructures: It manages the infrastructures and the public domain of the State. The General Directorate of Human Hydraulics of this ministry is responsible, among other things, for supplying the population with drinking water, collecting data and hydrological measurements (heights, flows, and other limnological

measurements...). State-owned companies such as the Ports of Abidjan and San Pedro are under the supervision of the Ministry of Transport. The National Meteorological Department (DMN/SODEXAM) collects climatological data (rain, temperature, wind, etc.) through its network of weather stations. Its relations with the sub-regional structures allow it to play an important role in the National Coordination Body of the Convention to Combat Desertification.

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The Ministry in charge of Petroleum, Energy and Renewable Energy Development: It implements the Government's energy policy. Its responsibilities include the regulation, control and orientation of the production, transport and distribution of conventional, new and renewable energies, as well as the implementation and monitoring of the Government's policy on the economy, energy and the promotion of renewable energy, in conjunction with the Ministry in charge of Health, Environment and Sustainable Development.

The Ministry in charge of Health and Public Hygiene: The Ministry in charge of Health and Public Hygiene collaborates with the Ministry of Health, Environment and Sustainable Development in the fight against all pathologies related to the environment, against noise pollution and the effects of electronic devices. As well as those of antennas and other communication dishes, in the identification of the origin or other causes related to the degradation of social morals and bioethics in relation to the environment.

The Ministry in charge of National Education: It ensures that the environmental issue is taken into account in the curricula. It participates in information, education and sensitization in the field of health, environment and sustainable development.

The Ministry in charge of the Public Service: It develops and implements, in relation with the Ministry in charge of Sanitation, Environment and Sustainable Development, the career profile for the development of human resources in the environment sector.

The Ministry in charge of Trade, Handicrafts and SME Promotion: It participates with the Ministry of Health, Environment and Sustainable Development and the other ministries concerned in the ban on the import of non-biodegradable industrial waste, in international negotiations on environmental goods and services within the framework of the World Trade Organization. In addition, the Ministry is working to reduce the impact of the activities of craftsmen (mechanics, garage owners, refrigeration specialists, etc.) on the environment. It is also planned to ask the local authorities to offer areas called "craft" for better environmental monitoring of the activities of these artisans, through active participation of the Ministry in programs of awareness and education of artisans and other entrepreneurs in the sector for the protection of the environment and the promotion of sustainable development.

The Ministry in charge of Scientific Research: It intervenes in the environmental sector through the research structures placed under its supervision. The National Center for Agricultural Research (CNRA) conducts research through its various departments (forestry, fish farming and fishing, development of agricultural and livestock products, etc.) on biological diversity (research on protected areas, aquatic pollution), the convention to combat desertification (land degradation, etc.) and climate change (forestry, etc.). The Centre de Recherches Océanologiques (CRO) contributes, among other things, through its activities to inventory, monitor biological diversity, and study lagoon and marine pollution. The Ministry is also involved in the issue of environmental management through its universities and

laboratories attached for the most part to the Training and Research Units (UFR). These are the Ecology Research Center (CRE) attached, with its LAMTO station, to the University of Nangui-Abrogoua (UFR of Sciences and Environmental Management), the Institute of Tropical Geography (IGT), the Institute of Research on Renewable Energies (IREN), the National Center of Floristics (CNF), the Laboratory of Physics of the Atmosphere (University of Cocody, UFR of SSMT).

The Ministry in charge of Animal and Fishery Resources: It ensures the implementation and monitoring of the Government's policy on animal production and fisheries resources. It is responsible for several actions including the development and management of fishing and aquaculture infrastructures, the promotion of maritime and fluvial fishing, the promotion of professional livestock, aquaculture and fishing organizations, and initial vocational training in the animal production and fishery resources sector in conjunction with the Ministry of Agriculture and the Ministry of Health, Environment and Sustainable Development.

The Ministry in charge of Agriculture: Its objectives are defined in the Master Plan for Agricultural Development (PDDA-1993). One of its main responsibilities is to reconcile the development of the agricultural sector with the imperatives of environmental protection. To this end, it has embarked on the process of setting up tools for the advent of sustainable agriculture, through the operationalization of an entity responsible for environmental issues.

The National Agency for Rural Development (ANADER), which carries out actions for the popularization of good agricultural practices and the supervision of rural populations, also participates, with the support of the National Laboratory for Support to Agricultural Development (LANADA), in the promotion of agriculture and sustainable development as prescribed in Agenda 21.

The Ministry in charge of Technical Education and Vocational Training: It contributes, in relation with the Ministry in charge of the Environment, to the training of Technical Support Agents for the Environment. Keeper of the Seals, Ministry in charge of Justice and Human Rights This Ministry ensures, in conjunction with the Ministry in charge of the Environment and Sustainable Development, that the relevant provisions of the Constitution, international conventions, laws and regulations concerning the environment and sustainable development are respected.

The Ministry in charge of Culture and Francophonie: It collaborates with the Ministry in charge of the Environment in the protection of sites, natural monuments and sacred forests as well as in the promotion of the cultural dimension of the environment.

The Ministry in charge of Women, Child Protection and Solidarity: It collaborates with the Ministry in charge of the Environment and Sustainable Development to improve the living environment and promote social welfare.

The Ministry in charge of Communication, Digital Economy and Post: It collaborates in the development and implementation of information, awareness and education programs on the environment. It contributes, together with the Ministry of Environment and Sustainable Development and the other Ministries concerned, to the elimination of electronic waste as well as to the fight against the effects of electronic devices as well as those of antennas and other communication parabolas.

The Ministry in charge of Tourism: The Ministry in charge of Tourism is responsible for the development of national parks and nature reserves for tourism purposes, in collaboration with the Ministry in charge of the Environment and Sustainable Development, and ensures the rational use of tourist facilities in protected areas.

The Ministry in charge of Construction, Housing, Sanitation and Urban Planning :It is responsible for the management of urban land, urban planning and the sanitation and drainage network, the control and monitoring of the operation and maintenance of the infrastructure of the primary and secondary networks of the City of Abidjan. Within the framework of the leasing contract with the Société de Distribution d'Eau de la Côte d'Ivoire (SODECI). The Department of Sanitation and Drainage participates in environmental protection by monitoring the activities of companies awarded public sanitation contracts whose specifications provide for environmental rehabilitation, in accordance with the requirements of the environmental and social impact study.

The Ministry in charge of Transport: It collaborates with the Ministry in charge of the Environment and Sustainable Development in the fight against air and water pollution from motor vehicles as well as from ships and other navigational means.

The Ministry in charge of Water and Forests: It collaborates with the Ministry in charge of the Environment in the implementation of national policies related to the sustainable management of wildlife and its rational exploitation.

Structures such as the National Office for Technical Studies and Development (BNETD) and the National Committee for Remote Sensing and Geographic Information (CNTIG) hold important biophysical and socioeconomic information.

In third place, is the local authorities that play a determining role in the sector.

The Law n°2003-208 of July 7, 2003 modified by the ordinance n°2007-586 of October 4, 2007 on the transfer and distribution of competences from the State to the Territorial Communities (in terms of environmental protection and natural resources management) determines the competences, the accompanying measures of the attributions of competences in Côte d'Ivoire. Decentralization provides a strategic framework for local governance involving all actors in a vision of local democracy and orientation towards local

development. Elected officials who have the legitimacy to take action at the local level lead the communities. In addition, the law n°2014-390 of June 20, 2014 of orientation on sustainable development orders local authorities to develop and implement local agendas as well as to set up Sustainable Development Committees.

In fourth place, is mention the Civil Society Organization (CSO).

Numerous CSOs, particularly NGOs working in the field of the environment and sustainable development, are working to contribute to the protection of the environment and the promotion of sustainable development.

In fifth place, is quote the private sector

The private sector in Côte d'Ivoire is involved in environmental action either directly or through partnerships or concession contracts. The waste collection sector is nowadays entrusted to private companies. National consulting firms are becoming increasingly involved, particularly by specializing in environmental assessments.

In sixth place, is mention International Cooperation

In terms of scientific research, in addition to national research centers, institutes and laboratories, there are also those of foreign countries based in Côte d'Ivoire, such as the Institut de Recherche pour le Développement (IRD) and the Centre Suisse de Recherche Scientifique (CSRS). Finally, international research institutions are based or represented in Côte d'Ivoire: The West African Rice Development Association (WARDA), the International Institute of Tropical Agriculture (IITA) and the International Maize and Wheat Improvement Center (CIMMYT). In terms of development, we could mention regional (ADB, BOAD, ECOWAS, UEMOA, AU, NEPAD, CILSS), bilateral (EU, AFD, JICA, KFW, GIZ, SDC) and multilateral (UN DD Commission, GEF, WB, IMF, UNECA) cooperation agencies and organizations.

It is also noted lot of environmental policies under different political governments.

Ivorian environmental policy strategies date back long before independence and beyond. To gain a better understanding of the issue, we need to mention the provisions put in place and the entities created by each Ivorian government since independence in 1960, right up to the present day. In this part of our argument, we will focus on the context and causes of each development.

Our development will therefore be structured around 04 main periods.

Under the government of Felix HOUPHOUËT-BOIGNY from 1960 to 1993,

1. The First Ministry of the Environment was thus created, and several initiatives in favor of the environment were taken in addition to the pre-existing Decree of October 20, 1926 regulating dangerous, unhealthy or inconvenient establishments in French West Africa.
2. These include Decree no. 60-355 of November 2, 1960, creating the Comité National de la Protection de la Nature;
3. Décret n° 64-415 du 04 novembre 1964 portant réorganisation du Comité National de la Protection de la Nature;
4. The creation of the Société de Développement des Forêts (SODEFOR), on September 15, 1966 by decree N°66-422 to "study and propose to the Government of Côte d'Ivoire, all measures tending to ensure the execution of plans for the development of forestry production and related industries, either by direct intervention, or by coordinating, directing and controlling the action of the various public or private bodies concerned". Since 1985, it has been a Public Industrial and Commercial Establishment (EPIC) ;
5. The creation of the Ministry's Resource Center in 1983, following the creation of the National Environment Commission by Decree no. 73-31 of January 24, 1973, reorganized by Decree no. 85-53 of January 1985, under the authority of the Ministry of the Navy;

6. The creation of CIAPOL (Centre Ivoirien Antipollution) in 1991 by decree N° 91-662 of October 09, 1991, creating a public administrative establishment (E.P.A) and determining its remit, organization and operation. The center was set up in the wake of a major oil spill that seriously polluted the Ivorian coastline in October 1991. Its mission is to analyze water, waste and residues, assess pollution and nuisances, and set up a continuous environmental monitoring system. This institution faced Côte d'Ivoire's biggest environmental crisis on August 19, 2006, when the Probo Koala, a Greek vessel chartered by trader Trafigura, spilled toxic waste in Abidjan;
 7. The creation of a public administrative body, the Laboratoire National d'Appui au Développement Agricole (LANADA), by decree no. 91-760 of November 14, 1991. Its mission is to preserve and improve the quality of animal and plant products and their production conditions ;
 8. The creation of CODINORM (Côte d'Ivoire Normalisation), an Ivorian standardization association set up on September 24, 1992 by the private sector, with authorization from the Council of Ministers on August 26, 1992. This institution is responsible for developing, approving and distributing national standards, and for participating in the development of regional and international standards;
 9. The creation of the Agence Nationale d'Appui au Développement Rural (ANADER) on September 29, 1993. Its mission is to "contribute to improving living conditions in rural areas by professionalizing farmers and professional agricultural organizations, by designing and implementing appropriate tools and approaches, and programs to ensure sustainable and controlled development".
- Under the government of Henri Konan BEDIE from 1993 to 1999,
10. We have mainly listed Law no. 96-766 of October 03, 1996 on the Environmental Code;

11. The creation in 1996 of the Centre de Recherches en Ecologie (CRE) by decree no. 96-613/09-08-96
12. Law n°1996-669 of August 29, 1996 on the Petroleum Code;
13. The 1996 Framework Program for the Management of Protected Areas;
14. The National Health Development Plan (PNDS) 1996-2005;
15. The creation of the Agence Nationale de l'Environnement by Decree N°97-393 of July 09, 1997. This institution, whose mission is to implement environmental projects and programs in Côte d'Ivoire, was created with the aim of ensuring that environmental realities are strictly taken into account in programs and projects, which must then be well planned and perfectly executed before the monitoring and evaluation phase;
16. The creation of SODEXAM (Société d'Exploitation et de Développement Aéroportuaire, aéronautique et Météorologue), a state-owned company responsible for the management, operation and development of airports, meteorology and aeronautical activities in Côte d'Ivoire, in accordance with its founding decree N° 97-228 of April 16, 1997 ;
17. The creation of the CNRA (Centre National de Recherche Agronomique de Côte d'Ivoire) in 1998, following the dissolution of several research structures (IDEFOR, IDESSA, CIRT), with the aim of better coordinating agronomic research in order to obtain better results;
18. Secondly, Law no. 98-755 of December 23, 1998 on the Water Code;
19. And finally, the declaration of the Forestry Policy in 1999 to correct the shortcomings of the Forestry Master Plan 1988-2015.

Under Laurent GBAGBO's government from 2000 to 2011,

20. The creation of the Office Ivoirien des Parcs et Réserves (OIPR) by Decree N°2002 -359 of July 24, 2002, tasked with preserving and enhancing a representative sample of national biological diversity, and maintaining ecological processes in protected areas on a

sustainable basis. This assignment stems from the Programme Cadre de Gestion des Aires Protégées (PCGAP) identified in 1996 following a diagnostic assessment of the national parks and nature reserves sector in Côte d'Ivoire;

21. Following the promulgation of Law 2002-102 of February 11, 2002 on the management and financing of national parks and nature reserves, the Fondation pour les Parcs et Réserves de Côte d'Ivoire (FPRCI) was created in collaboration with the Côte d'Ivoire government, development partners and civil society ;
22. The main reforms recorded are The National Reforestation Program (2006-2015) designed to rehabilitate the forest and ensure sustainable reforestation management ;
23. The Stratégie et Programme National de Gestion Durable des Déchets Urbains (National Strategy and Program for Sustainable Urban Waste Management), adopted in February 2002, which aims to put in place a comprehensive management concept to protect the environment and improve living conditions;
24. Law n°2002-102 of February 11, 2002 on the creation, management and financing of National Parks and Nature Reserves;
25. The creation of the Commission Nationale du Développement Durable (CNDD) by decree no. 2004-649 of December 16, 2004;
26. The Côte d'Ivoire Coastal White Paper in 2004 (integrated coastal zone management);
27. Fondation pour les Parcs et Réserves de Côte d'Ivoire in 2004;
28. In 2008, the Ministry's Documentation Centre changed its name to "Resource Centre", following a capacity-building mission for all staff in Nairobi, Kenya. The first database was thus set up as part of modern documentation management;
29. The Poverty Reduction Strategy Paper (PRSP) adopted in 2009;
30. And the National Water Policy document in 2010.

Under the government of His Excellency, Mr. Alassane OUATTARA, President of the Republic of Côte d'Ivoire since 2011, the following reforms have been implemented:

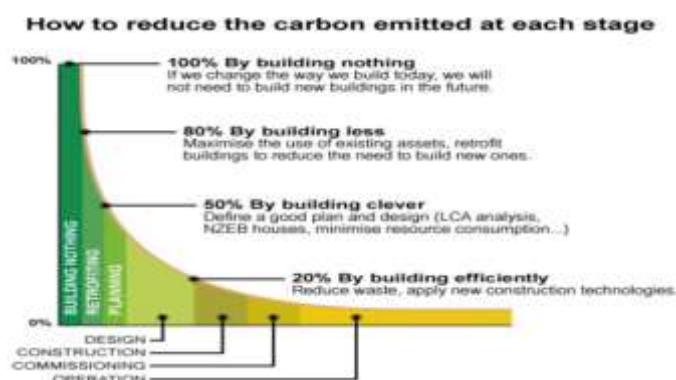
31. The creation of a National Program to Combat Climate Change (PNCC) in 2012 as part of the fight against climate change;
32. The National Chemicals Management Strategy adopted in 2014;
33. The National Strategy for the Management of Natural Resources adopted in 2014;
34. The National Climate Change Strategy adopted in 2014;
35. Law n°2014-138 of March 24, 2014 on the Mining Code;
36. The adoption of Law n°2014-390 of June 20, 2014 on Sustainable Development. The country confirmed its commitment to the Sustainable Development Goals (SDGs) in 2015;
37. The modification of decree no. 2004-649 of December 16, 2004 creating the National Commission for Sustainable Development (CNDD), by decree no. 2015-268 of April 22, 2015 creating, assigning, organizing and operating the CNDD.
38. The National Waste Management Strategy adopted in 2015 for the period 2016-2020;
39. The National Development Plan 2016-2020 adopted in 2015;
40. The National Sanitary Waste Management Plan (PNGDS) 2016-2020 and the National Health-Environment Policy in June 2016;
41. The National Education-Training Sector Development Plan (PNDEF);
42. The Education-Training Sector Strategic Plan 2016-2025;
43. Côte d'Ivoire has also joined the New Partnership for Africa's Development (NEPAD), within the framework of the Clean Development Mechanism (CDM);
44. Examination of a new draft law on the environment, to meet new challenges such as the evolution of environmental law at international level, the problem of climate change and the sustainable management of natural resources;

45. Examination of the project to set up the Agence Nationale de Gestion Intégrée du Littoral (ANAGIL), proposed by the West African Coastal Management Program (WACA). This agency will be responsible for the development, protection and integrated management of the coastline.
46. Creation of the Comité Sectoriel du Dialogue Social (CSDS) in each Ministry, notably the Ministry of the Environment and Sustainable Development, by decree in October 2022. It is a permanent consultative body on issues of all kinds relating to the social treatment of civil servants, between the Administration and the trade unions of the Ministry concerned.

Almost all the formulas used to designate legal standards reflect the context in which they were created and their attributes.

Based on these findings, it can be concluded that the environmental sector plays a crucial role in country development. By implementing effective environmental policies, investing in green technologies, and promoting environmental education, countries can achieve sustainable development that encompasses economic growth, social well-being, and environmental protection. It is vital for governments and stakeholders to prioritize the integration of environmental considerations into their development strategies to ensure a sustainable and prosperous future for their countries.

Figure 2: Carbon dioxide removal method



Source: Open Access Government Business Platform, 2023

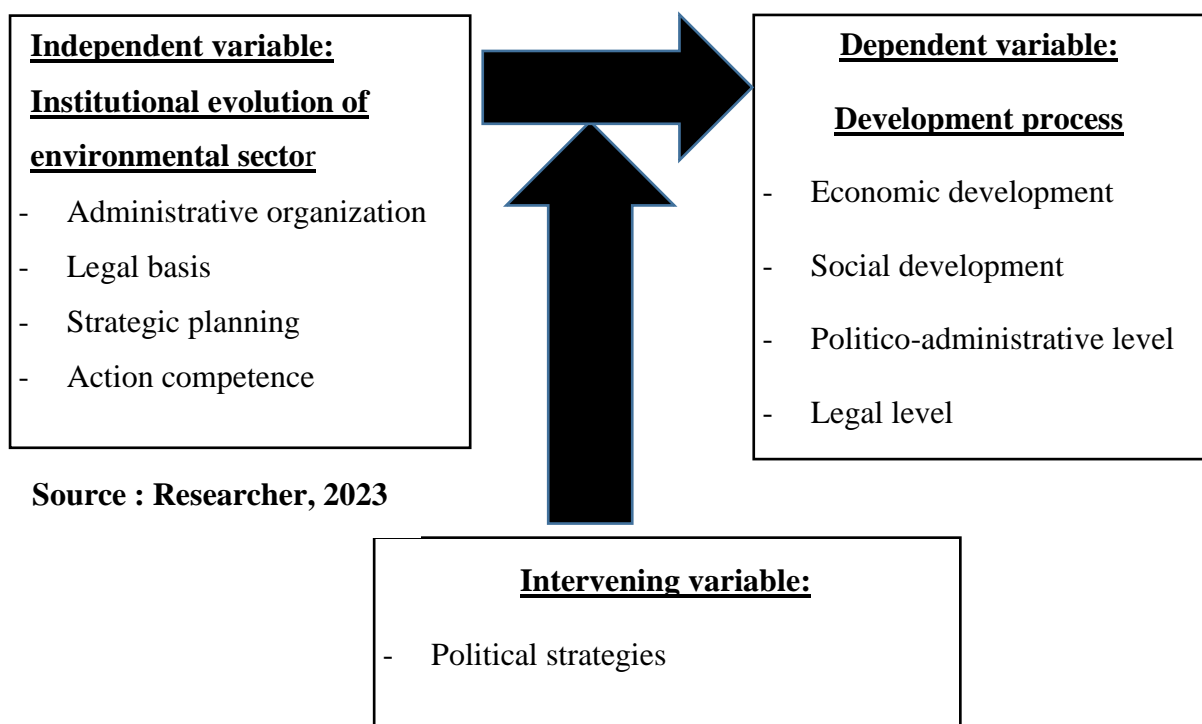
2.5. Conceptual framework

The present study is made of three types of variables : Independent variable is that which is free from any impact of other elements. In our study, the independent variable is the institutional evolution of environment which is explained by usage of administrative organization, legal basis, strategic planning and action competence.

Dependent variable is that which can be affected by any other element. In our study, the dependent variable is development process which is explained by economic development, social development, the politico-administrative level and legal level.

Intervening variable is a hypothetical variable used to explain causal links between others variables. There, it includes political strategies like public policies, programs, reforms and actions.

Figure 3: Conceptual framework of the study



The institutional evolution of the environmental sector in Côte d'Ivoire's development has been a subject of scholarly interest, but there are conceptual and contextual gaps that require further exploration. A critical review of previous literature reveals several areas where research is lacking or where deeper investigation is needed.

Many existing studies provide an overview of the current state of the environmental sector but lack a comprehensive historical analysis (Gnangui, 2010). However, a deeper examination of the historical evolution, policy shifts, and key events influencing the sector is crucial to understanding its present state.

While some studies acknowledge the existence of environmental policies, there is a gap in assessing the effectiveness of these policies in achieving sustainable development goals (Douzo & Koubo, 2003). Research should delve into the evaluation of policy implementation, enforcement mechanisms, and their impact on environmental outcomes.

The role of various stakeholders, including local communities, non-governmental organizations, and the private sector, in shaping the environmental sector's evolution is often overlooked (d'Espagnat, 1829-1971). At this level, we saw that more nuanced analysis of stakeholder engagement and its influence on policy formulation and implementation is needed.

Many studies focus primarily on internal factors affecting the environmental sector, neglecting the impact of global dynamics, international agreements, and transboundary environmental issues (Kodivaa, 1992). Exploring the global context and its implications for Côte d'Ivoire's environmental policies is a critical gap in the literature.

Existing research tends to compartmentalize the environmental sector without sufficiently considering its interconnectedness with other sectors like agriculture, industry, and urban development (Coulibaly, 2014). More holistic approach that examines cross-sectoral linkages is essential for a comprehensive understanding of environmental governance.

Comparative studies with other countries facing similar environmental challenges are scarce (Dorsouma, 2022). Comparative analysis like Rwanda context could provide valuable insights into best practices, lessons learned, and innovative solutions applicable to Côte d'Ivoire.

The socioeconomic dimensions of environmental policies, such as their impact on livelihoods, poverty reduction, and social equity, are often underexplored (Dogore & Guisso, 2007). Future research should pay closer attention to the social implications of environmental policies.

The role of technological innovations, including green technologies and sustainable practices, in shaping the environmental sector is not thoroughly explored (Halle & Bruzon., 2006). Research should also investigate how technological advancements can contribute to environmental sustainability.

CHAPTER 3: METHODOLOGY

3.0. Introduction

This chapter highlights the steps used to assess the link between institutional change in the environment sector and development in Côte d'Ivoire.

The methodology is structured as follows: research design, target population, sample size and sampling techniques, data collection techniques, data collection procedures, data analysis and presentation techniques. Finally, the ethical encounter in the course of the research is set.

3.1. Research design

Research design refers to the overall strategy or plan that a researcher follows to investigate a particular research problem or question. It outlines the framework for collecting, analysing, and interpreting data in a systematic and organized manner. Research design is a crucial component of the research process and helps researchers determine how they will approach their study (Encyclopediaofresearchdesign, 2010).

The specific research design used can vary depending on the nature of the research, such as whether it is exploratory, descriptive, explanatory, or qualitative, among other factors. Overall, a well-structured research design is essential for guiding the research process and ensuring that the study's objectives are met effectively (Sarsfield & Garson, 2018).

The foundations of this research led to use a mixed method, both qualitative and quantitative. Informal method to collect qualitative data and the formal method is use to evaluate quantitative data (Uingereza, 1979). This technique is justified by the assessment of achievements and shortcomings in the environment, supported by a measurement and enumeration of actions over time.

3.2. Target population

A case study of a target population has several important characteristics. However, in short, a case study on a target population is distinguished by its depth, contextualization and focus on a specific group. It enables researchers to explore complex situations in depth and obtain detailed information about their object of study (Remenyi, 2013).

The target population of the study is Abidjan, the largest city in Côte d'Ivoire, with 2,994 inhabitants/km² (out of a total population of 5,616,633) and according to ONU habitat reports, is one of the fastest-growing cities in Africa (ONU Habitat, 2022).

3.3. Sample size

Sample size is calculated using the standard formula for determining the best size of the target population (Ryan, 2013). Application of this formula requires precision in terms of margin of error, confidence level [Score Z] and standard deviation.

The following formula with with N, the ideal population size is applied:

$$\frac{(\text{Score } Z)^2 \times \text{ecart type} \times (1 - \text{ecart type})}{(\text{marge d'erreur})^2}$$

Equation 1: formula with N, the ideal population size

For this study, the margin of error of plus or minus is 5%. and the confidence level is set at 95% so, 1.96, with a standard deviation of 0.5.

So, the calcul is:

$$N = ((1,96)^2 \times 0,5 \times (0,5)) / 0,052$$

$$N = 384,16$$

Sample size of this study is 385.

3.4. Sample selection techniques

The city of Abidjan, divided into communes and subdivided into districts, with 5,616,633 inhabitants was chosen to carry out the study. Of these, 385 were carefully selected by stratified random sampling method to meet the needs of the study. In this approach, all individuals of the population have an equal probability of being included in the sample. Stratified sampling improves the accuracy and representativeness of the results by reducing sampling bias. (Miller, 1973). It is used when we might reasonably expect the measurement of interest to vary between the different subgroups, and we want to ensure representation from all the subgroup. The population with this method is first divided into subgroups (or strata) who all share a similar characteristic (Dhivyadeepa, 2015).

3.5. Data collection techniques

Data collection methods are essential to research, as they determine the quality and validity of our results. To conduct this study in Abidjan, data was collected in two form: primary data with questionnaires and interview and secondary data with the existing literature.

3.5.1. Documentary

This method involves critically examining and evaluating documents, sources, articles, books and other types of written material to gather information relevant to this research like others (Guiyte, 2006). By using it rigorously and systematically, the basis of this research is strong and produce a solid, well-informed dissertation.

3.5.2. Questionnaire

The questionnaire is a structured, standardized data collection tool that can be used to gather objective information from participants in research (Melchers, 1988). It has been thoughtfully designed in this analysis to obtain quality data. It contains both open and closed questions, as well as multiple-choice questions.

The questionnaire was administered via two social networks, in particular: Facebook and WhatsApp. The application Canva is chosen to prepare our questions, which have the same structure and objectivity as the interview.

The data collected using the various techniques concerned: The conditions under which Ivorian environmental sector institutions exist, the diversity of the sector's institutions. The geographical location of the various institutions, Opinions on the importance of the sector in the Côte d'Ivoire, Opinions on the interaction between the environment sector and other sectors and analysis of public environmental policies in Côte d'Ivoire.

3.5.3. Interview

Interview is a research method widely used in many disciplines. This research method has provided us with valuable and accurate information for our dissertation.

Interviewing requires the choice of a privileged subgroup within the sample, direct interaction, flexibility in the choice of responses and confidential anonymity (Aubel, 1994).

In keeping with the concept, interview of senior Ivorian government officials is made, environmental experts and consultants in person, after arranging appointments in advance.

With the same structure and objectivity as the questionnaire, the content of the interview included close-ended questions on the standard characteristics of the Ivorian environmental sector, with open-ended questions to elicit the critical spirit of the participants.

3.6. Validity and reliability

Obtaining reliable, royalty-free data required special methods.

3.6.1. Validity test of research instrument

Data validity and reliability refer, on the one hand, to the extent to which the data accurately and completely capture the phenomenon under study with appropriate collection methods (Bolarinwa & Akeem, 2015).

As part of our analysis, we ensured data validity by using drafting questionnaire with face validity and content validity. In other words, the opinions and analyses of course masters, development studies experts and supervisors' comments were used to check the questionnaire items and agree that the test is a valid measure of the concept that is being measured in reality. These evaluators, in addition to the classmates, examined all the items in the questionnaire for readability, clarity and completeness, reaching a degree of agreement on the items to be included in the final questionnaire.

3.6.2. Reliability test of research instrument

Data reliability test refer to the fact that data collection instructions and procedures are clear and consistently followed (Taherdoost, 2018). The test-retest method, which involves repeating the same study at different point in time to look for the same result, is used. Reliability was tested by means of consistency and reproducibility tests at different times and by different participants during interview. In other words, the same questions were asked several times, in different ways, to different respondents, at different times, to see if the answers were the same. We also carried out peer reviews, whose comments and suggestions helped us to identify any errors or shortcomings.

3.7. Data processing

For content clarity, the researcher proceeds to data reduction, sorting irrelevant data from relevant data, bringing order from chaos and giving shape to a mass of data. This process begins with a review of the data collected from primary and secondary sources to detect errors and omissions, and to ensure that these are corrected and the tables are ready for tabulation: it's editing.

Next comes coding, which involves two important operations: (a) choosing the categories to be used, and (b) assigning individual responses to these categories. These categories must be

adapted to the research problem, exhaustive of the data, mutually exclusive and unidirectional.

In addition, classification enables the researcher to group statistical data into various comprehensible homogeneous groups for convenient interpretation. Uniformity of attributes is the basic criterion for classification, and data is grouped according to similarity.

Finally, tabulation is the process by which the researcher summarizes the raw data and presents it in compact form in a table for subsequent analysis.

3.8. Data analysis

The research objectives have guided the data analysis. Thus, to assess the institutional evolution of the environmental sector in the economic, social, political and administrative development of the Côte-d'Ivoire, and to better propose solutions to the issues at stake in this field, this study used both quantitative and qualitative data analysis.

Statistical procedures with SPSS software for quantitative data and explanatory approaches for qualitative data were among the data analysis strategies used.

For quantitative data analysis, the cursor was placed on the number of programs and public policies in the environment sector, and the number of geographical areas where they were established ex officio from 1945 to 2022. This approach culminated in an assessment of the contribution of these policies to the macro-economic development.

For the qualitative data analysis, the researcher focused on administrative organization, the consistency and quality of initiatives and reforms emanating from the Ivorian environment sector and their success rate. This approach made it possible to assess the importance of this sector at microeconomic level and on the quality of life of citizens.

3.9. Ethical considerations

The data collected as part of a dissertation is analyzed by other researchers and published on several platforms. It is therefore essential that the data is collected honestly and transparently, without manipulation or falsification, with respect for the participants and a concern for personal analysis without plagiarism, and with full social responsibility.

This guarantees the integrity of the research and real credibility with administrative institutions and, in particular, with our academic institution (Perera, 2017).

As part of this research, the researcher ensured that participants understand the purpose, role, potential risks and benefits, and that they voluntarily agree to provide data that has been treated with respect and anonymity. Researcher ensured that the approach respects human rights, since it only assesses a context with the aim of improving it.

The researcher is very clear in documenting the methodological choices so that other researchers could replicate the study.

Finally, as the world is constantly evolving, according to the phases of strategic planning, the researcher is ready, at any time, to revise this ethical approach according to new information or problems that may arise.

3.10. Limitations of the study

It was a real honor for us to do an internship at the Directorate of Studies, Planning and Statistics of the Ministry of Environment and Sustainable Development of Côte d'Ivoire. The difficulties of data collection are therefore limited to our level.

3.10.1. The difficulty of documentary research

Since 1980, the Ivorian government, in order to make available reports on studies, decisions, programs and projects in the environment sector, has set up a documentation unit directly attached to the Ministry of the Environment and Sustainable Development and open to the

public, professionals, students and pupils. In addition to this tool, thanks to the government's roadmap, we have been able to learn about the data and the rate of completion of projects and programs started before 2023, to be completed during or after the year.

3.10.2. The difficulty of the sample survey

Limiting the scope of the study to Abidjan, although restrictive from the point of view of sampling, allowed us to significantly limit the costs and time required to conduct the study. However, it should be noted that the major difficulties came from agents who were recalcitrant with respect to the importance of the study. But, with a respectful approach and clear, precise questions that aroused their interest, we were able to get them to share their views with us.

3.10.3. The Methodological Difficulty

We read several books on the subject, but our methodological choice was not easy, given the complexity of the subject and the reluctance of the respondents to answer. However, in keeping with the rules of analysis, we have chosen a particular method to facilitate data collection.

3.10.4. Financial and logistical difficulties

Although we were doing an unpaid internship at the Ministry's Directorate of Studies, Planning and Statistics, we were able with our savings to achieve our specific objectives of establishing the institutional path of the environment sector in the development process of Côte d'Ivoire.

CHAPTER 4: PRESENTATION AND DISCUSSION OF THE FINDINGS

4.0. Introduction

This presentation, interpretation and analysis section must be solid and convincing (Pearson, 2010). To achieve this, a clear structure is chosen by organizing the results in a logical and coherent way, with headings and sub-headings to guide the reader. Graphs and tables is used, correctly labelled, to make the results more accessible.

A particular method explain the means by which the data were collected and analyzed, to enable the reader to understand the rigor of the approach. Raw results was presented before interpreting them through trends, correlations and important conclusions.

Results was contextualized, within the existing literature, emphasizing their importance. This enabled the researcher to be quite transparent about the limitations of the study. The following paragraphs will refer to the general characteristics of the respondents and the Ivorian environment sector, before providing data on the objectives of the study.

4.1. General identification of the respondents

It is essential to provide information characterizing the target population for whom data is collected. This make it easier to judge the importance of the experiences and the content of the opinions.

4.1.1. Age of respondents

The age of the respondents who were partners in this study's investigations is shown in the following table.

Table 1: Age of respondents

Age of respondents	Number of respondents	Percentage (%)
25-27 Years old	45	20
28- 30 Years old	70	10
31- 35 Years old	70	10
36- 40Years old	100	30
41-50 Years old	100	30
Total	385	100

Source: Field data, 2023

In table 1 below, 20% of respondents are aged between 25 and 27, 10% are aged between 28 and 30, while a further 10 percent are aged between 31 and 35. 30% are between 36 and 40, while another 30 percent are between 41 and 50. This reflects the fact that the majority of people with shared information on the subject of the study have genuine experience in this field. This characteristic lends a certain confidence to the collection of their opinions. The youngest respondents, still in the prime of their lives, don't really stand out from the crowd, despite their small numbers. On the contrary, their critical thinking and open-mindedness about the world enable them to make constructive analyses.

4.1.2. Sex of respondents

Clearly, there are other genres that have been approved by the international community. But, given the focus of the study, it is crucial to obtain data from men and women in particular.

Table 2: Sex of respondents

Sex of respondents	Number of respondents	Percentage (%)
Male	275	65
Female	110	35
Total	385	100

Source: Field data, 2023

Table 2 below, shows that 65% of people with constructive, well-founded opinions on the issue under analysis are men. Only 35% are women. At first glance, it seems that men are more informed and involved in national development issues. But, in reality, with the reforms for women's inclusion and the high representation of women in government and the most important sectors (45% representation), it's clear that women also have their say.

4.1.3. Marital status of respondents

The following table shows the marital status of the respondents, classified in three categories: single, married or divorced.

Table 3: Marital status of respondents

Marital status of respondents	Number of respondents	Percentage (%)
Single	95	30
Married	253	50
Divorced	37	20
Total	385	100

Source: Field data, 2023

Table 3 below, indicates that 30% of respondents, mostly aged between 25 and 30, are single, while 50% are married. Only 20% are divorced. Thus, the majority of married respondents present themselves as responsible, well-informed people. Their analyses are constructed and placed according to sustained styles. The single respondents are also consistent, and clearly measure the scope of the study.

4.1.4. Respondents' areas of activity

At this level, the precise fields of activity of the survey respondents are established.

Table 4: Respondents' areas of activity

Respondents' areas of activity	Number of respondents	Percentage (%)
Students	39	10
Environmental sector	247	60
Other sectors	99	30
Total	385	100

Source: Field data, 2023

According to table 4 below, 10% of respondents, who turn out to be women, are students, while 60% work in the environmental sector and 30% in other sectors such as economics, law and social affairs. The women represented in this table are not yet integrated into professional life. However, they already have the necessary skills and knowledge to provide important data on the subject of the study. The accuracy of the data and the degree of variation in opinions can be measured thanks to the involvement of a large majority of respondents in the environment sector and in other Ivorian sectors.

4.2. Findings related to the impact of the environment sector on socio-economic development in Côte d'Ivoire

There, focus is set on the standard elements that make the environment sector in Côte d'Ivoire so special. This part is quite decisive because it allows to set the scene which should allow to best circumscribe the work area and beyond that, to allow readers to have precise information on the object of our analysis. With the help of tables, their diversity are showed, when they were created and where they are located. Then, we list data to show the positive and negative impact of the environment on socio-economic development in Côte d'Ivoire. We had to gather opinions on the fact that the Ivorian population is generally young and in good health, thanks to the quality of the environment. To answer this question, we needed to gather data on infant mortality rates, average life expectancy, access to drinking water and

the existence of adequate sanitation facilities. We also relied on World Bank [WB] and World Health Organization [WHO] reports for response rates.

4.2.1. Diversity of institutions

The following table shows the various players in the environmental sector in Côte d'Ivoire.

Table 5: Diversity of institutions

The various players in Côte d'Ivoire environmental sector	Number of respondents	Percentage (%)
The ministries and structures of state	55	20
Local authorities	70	10
The Ivorian ministry of environment	80	30
Civil society organization	40	10
Private sector	40	10
International cooperation	100	20
Total	385	100

Source: Field data, 2023

According to table 5 above, 30% of environmental sector players are registered within the [MINEED] Ministry of the Environment and Sustainable Development, with strong representation within other ministries and international participation of 20% each. Civil society, the private sector and deconcentrated and decentralized entities do not remain on the sidelines, with a concentration of actors for a percentage of 10% each. The environmental sector in Côte d'Ivoire is diverse. The country has a specific strategy, which constitutes the guideline at national level, with numerous international agreements reflecting its commitment to the pursuit of the Sustainable Development Goals [SDGs].

Table 6: Data-producing institutions in Côte d'Ivoire by environmental theme

THEMES	SOURCES
Air	Programme national OZONE ; Projet Changements climatiques, SODEXAM (Société d'Exploitation et de Développement Aéroportuaire, Aéronautique et Météorologue); Université de Cocody, CODINORM (Côte d'Ivoire Normalisation)
Soils	Direction Agriculture; CNRA (Centre National de Recherche Agronomique); Direction des Mines ; CODINORM ; ANADER (L'Agence Nationale d'Appui au Développement Rural)
Forests	SODEFOR, Direction Générale des Eaux et Forêts; CRE (Centre de Recherches en Ecologie) ; WWF (World Wildlife Fund) ; CNRA
Marine and coastal environment	CRO (Centre de Recherches Océanologiques); Direction des Pêches; Marine Marchande, Forces armées; Ports d'Abidjan et de San Pédro; Directions des Hydrocarbures; Directions de l'Energie
Biodiversity	OIPR (Office Ivoirien des Parcs et Réserves); CRE; CNRA ; LANADA (Laboratoire National d'Appui au Développement Agricole); LANEMA (Laboratoire National d'Essais de qualité de Métrologie et d'Analyses)
Water resources	SODECI (Société de distribution d'eau de la Côte d'Ivoire); Ministère de la Santé; Direction de l'Agriculture ; CRO (CENTRE DE RECHERCHES OCÉANOLOGIQUES), CIAPOL ; Ministère des Eaux et Forêts, Ministère de la Construction et de l'Urbanisme ; CODINORM
Urban environment	Urban Planning and Construction Departments; Statistics Departments; Local authorities, Territorial Administration
Environment/ Health	Ministries of Health; Ministry of the Environment and Sustainable Development Natural disasters
Natural disasters	Direction Nationale de Protection Civile; Universities/Research centers

Source: Field data, 2023

Table 6 above shows the existence of a multitude of players in the environmental sector operating in all the specific environment-related fields of air, soil, forests, water resources, the marine and coastal environment, biodiversity, the urban environment, health and natural

resources. This means that the Ivorian authorities are aware of the extent of their environmental heritage. In order to ensure their conservation and protection, several international and national players are deployed in the field with programs and activities.

4.2.2. Creation of institutions

The following table shows the creation dates of the various environmental sector institutions in Côte d'Ivoire.

Table 7: Creation of institution

Date of creation of environmental sector players in Côte d'Ivoire	Number of respondents	Percentage (%)
The ministries and structures of state 1954-1960	80	20
Local authorities 1954-1960	55	10
The Ivorian ministry of environment 1954	100	30
Civil society organization 1960	40	10
Private sector 1960-1980	70	10
International cooperation 1972-2023	40	20
Total	385	100

Source: Field data, 2023

According to table 7, 30% of environmental players have taken up their positions since 1964, when the institutions to which they belong were created, compared with 40% and 30% between 1954 and 2023. Without asserting that environmental considerations did not previously exist, and remaining within the timeframe chosen for this study, investigation showed that environmental institutions have indeed been created over the years, with international cooperation still under negotiation in the year 2023.

4.2.3. Location of institutions

The following table shows the location of environmental institutions in Côte d'Ivoire.

Table 8: Location of environmental players in Côte d'Ivoire

Environmental players in Côte d'Ivoire	Number of respondents	Location
The ministries and structures of state	70	Abidjan
Local authorities	86	Ivoirian deconcentrated and decentralized territories
The Ivorian ministry of environment	35	Abidjan
Civil society organization	63	All of Côte d'Ivoire
Private sector	56	All of Côte d'Ivoire
International cooperation	75	The whole world

Source: Field data, 2023

This table shows the geographical location of environmental institutions in Côte d'Ivoire. It shows that a large proportion of the above-mentioned structures are located in the Abidjan area, with strong local representation, while the others are located throughout Côte d'Ivoire, with their headquarters outside the country.

4.2.4. Côte d'Ivoire's environmental sector is a source of revenue and a promoter of foreign investment

Respondents were asked whether the Ivorian environmental sector is a source of revenue and a promoter of foreign investment. The following table shows the responses obtained.

Table 9: Côte d'Ivoire's environmental sector is a source of revenue and a promoter of foreign investment

Côte d'Ivoire's environmental sector is a source of revenue and a promoter of foreign investment	Number of respondents	Percentage (%)
Strongly disagree	156	11,8
Disagree	30	17,6
Neutral	40	11,8
Strongly agree	57	23,5
Agree	102	35,3
Total	385	100

Source: Field data, 2023

Table 9 above reveals that 35.3% of respondents agreed that Côte d'Ivoire's environmental sector is a source of revenue and a promoter of foreign investment, 23.5% strongly agreed, only 11.8% strongly disagreed, 17.6% disagreed and 11.8% remained neutral.

Côte d'Ivoire has an abundance of natural resources, including cocoa, coffee, oil, natural gas, timber and many others. These resources are essential sources of revenue for the country, particularly for exports. The country has attracted foreign investment in various sectors, including agribusiness, energy and infrastructure. These investments are often linked to the exploitation of natural resources and the creation of business opportunities. The Ivorian government has put in place policies to promote foreign investment, including tax incentives and measures to facilitate business start-ups, such as partial exemption from corporate income tax for the first few years of operation.

Côte d'Ivoire's economy has grown steadily in recent years, thanks in part to the exploitation of natural resources and foreign investment. This growth has attracted the attention of international investors.

The country is also active on the international trade scene, exporting agricultural products and raw materials. This participation in world trade is a source of income and investment.

4.2.5. Tourism booms in Côte d'Ivoire thanks to environmental promotion

We had to ask our target whether tourism is booming in Côte d'Ivoire because of environmental promotion or not. We have collected the opinions highlighted in the following table.

Table 10: Tourism booms in Côte d'Ivoire thanks to environmental promotion

Tourism booms in Côte d'Ivoire thanks to environmental promotion	Number of respondents	Percentage (%)
Strongly disagree	30	8,7
Disagree	70	13
Neutral	20	8,7
Strongly agree	175	43,5
Agree	80	26,1
Total	385	100

Source: Field data, 2023

Table 10 above reveals that 26.1% of respondents agreed that Tourism booms in Côte d'Ivoire thanks to environmental promotion, 43.5% strongly agreed, only 8.7% strongly disagreed, 13% disagreed and 8.7% remained neutral.

Tourism in Côte d'Ivoire has grown significantly in recent years, largely thanks to the promotion of the country's environment and natural attractions. Over the years, Côte d'Ivoire has seen an increase in the number of international tourists visiting the country. This growth can be attributed in part to the natural beauty of its national parks, beaches and nature reserves. The Ivorian government has put in place policies to promote sustainable and responsible tourism, with an emphasis on environmental preservation.

This has helped to attract an ecologically conscious public, notably with the Banco National Park, one of the most visited in 2023, created on April 04 1953 and covering an area of 3,438 hectares.

Investments have been made to develop tourism infrastructure, including the construction of lodges and ecolodges in natural areas, making visits more comfortable for travelers. Among the projects on the Ministry of Tourism's list in Côte d'Ivoire is the development of the coastline of Port-Bouet, a commune of Abidjan, with a 10 km stretch of unspool waterfront that will be made up of several modules, including the development of the seafront for walking and cycling. Côte d'Ivoire is home to a rich biodiversity, with national parks such as Tai, a UNESCO World Heritage Site. The promotion of these protected areas attracts nature and ecotourism enthusiasts.

The country has collaborated with international organizations to promote nature-based tourism. These partnerships have helped raise the country's profile as a tourist destination. The country also organizes environmental and conservation events and festivals, drawing attention to its commitment to nature protection. These include the Salon International du Tourisme d'Abidjan (SITA) and the [SARA] Salon International de l'Agriculture et des Ressources Animales.

4.2.6. The rate of environmental research in Côte d'Ivoire is growing rapidly

We had to get the views of our contacts on environmental advances. They seemed in the best position to answer our questions, since they are the ones who are supposed to be driving policy for the most part, and benefiting from it for others. The answers to this question are shown in the table below.

Table 11: The rate of environmental research in Côte d'Ivoire is growing rapidly

The rate of environmental research in Côte d'Ivoire is growing rapidly	Number of respondents	Percentage (%)
Strongly disagree	75	30
Disagree	64	13,3
Neutral	11	6,7
Strongly agree	75	30
Agree	150	20
Total	385	100

Source: Field data, 2023

Table 11 above reveals that 20% of respondents agreed that the rate of environmental research in Côte d'Ivoire is growing rapidly, 30% strongly agreed, 30% strongly disagreed, 13.3% disagreed and 6.7% remained neutral. Clearly, opinions are divided on this issue.

Indeed, the organization of conferences, seminars and events related to the environment in Côte d'Ivoire is on the increase. This shows the growing interest in these issues and encourages research. Government policies and initiatives to promote environmental research also play a key role. Ivorian authorities are increasingly recognizing the importance of research in solving environmental problems. There are also numerous research programs that lead students like us to specialize in the field, often producing dissertations and theses because of international mobility.

Opinions to the contrary are justified by the lack of funding, national, and international subsidies for environmental research initiatives in Côte d'Ivoire. This situation explains the relatively slow development of these programs.

4.2.7. Environment in Côte d'Ivoire is a factor in agricultural development

Our aim was to obtain opinions, based for the most part on personal experience, regarding the positive or negative influence of the environment sector on agriculture in Côte d'Ivoire.

The answers to this question are shown in the table below.

Table 12: Environment in Côte d'Ivoire is a factor in agricultural development

Environment in Côte d'Ivoire is a factor in agricultural development	Number of respondents	Percentage (%)
Strongly disagree	43	9,1
Disagree	43	9,1
Neutral	43	9,1
Strongly agree	115	27,3
Agree	141	45,5
Total	385	100

Source: Field data, 2023

Table 12 above reveals that 45.5% of respondents agreed that Environment in Côte d'Ivoire is a factor in agricultural development, 27.3% strongly agreed, only 9.1% strongly disagreed, 9.1% disagreed and a further 9.1% remained neutral.

The Ivorian government is focusing first and foremost on conserving natural resources through sustainable agricultural practices such as crop rotation, agroforestry and organic farming, which improve long-term productivity. There's also training, awareness-raising and incentives to create agricultural markets that put the Ivorian citizen at the heart of agricultural benefits. Despite all these positive points, there is still a real gap in the management of agricultural waste, the use of renewable energy for irrigation and the reduction of dependence on fossil fuels.

4.2.8. The environment in Côte d'Ivoire is a factor in the fall in raw material prices on the Côte d'Ivoire market

Women, traders, farmers, members of cooperatives and members of the Ministry of Agriculture were particularly keen to answer the question of whether the environment in Côte d'Ivoire is a factor in the fall in commodity prices on the Ivorian market. Their answers are shown below.

Table 13: The Ivorian environment is a factor in the fall in raw material prices on the Côte d'Ivoire market

The Ivorian environment is a factor in the fall in raw material prices on the Côte d'Ivoire market	Number of respondents	Percentage (%)
Strongly disagree		41,7
Disagree	148	27
Neutral	69	8,3
Strongly agree	69	8,3
Agree	99	16,7
Total	385	100

Source: Field data, 2023

Table 13 above reveals that 41.7% of respondents strongly disagree that the environment in Côte d'Ivoire is a factor in the fall in raw material prices on the Ivory Côte d'Ivoire market, 25% disagree, only 8.3% strongly agree, 16% agree and 8.3% remain neutral.

Agricultural products are increasingly expensive on the Ivorian market due to the cost of transporting goods over relatively long, unsealed routes, the relatively low cost of supply compared with the high rate of demand, and very high production costs. But when a tomato costs [150] Fcfa, the most affluent households feel no compunction in ignoring calls to lower and standardize prices.

4.2.9. The infant mortality rate in Côte d'Ivoire has fallen

We spent most of our time with women and medical staff, who shared their experiences with us. In addition to the other actors making up our target group, they were the most knowledgeable and experienced in answering this question. All the opinions received have been listed in the following table.

Table 14: The infant mortality rate in Côte d'Ivoire has fallen

The infant mortality rate in Côte d'Ivoire has fallen	Number of respondents	Percentage (%)
Strongly disagree	21	9,1
Disagree	21	9,1
Neutral	21	9,1
Strongly agree	176	45,5
Agree	145	27,3
Total	385	100

Source: Field data, 2023

Table 14 above reveals that 27.3% of respondents agreed that the infant mortality rate in Côte d'Ivoire has fallen, 45.5% strongly agreed, only 9.1% strongly disagreed, 9.1% disagreed and 9.1% remained neutral.

According to reports from the World Health Organization [WHO], the number of deaths at birth is estimated at 118 per 1000. With increased access to drinking water and sanitation, water-related illnesses affecting the health of infants are reduced. Physical and online awareness campaigns continue to play an essential role, particularly in the area of infant hygiene.

4.2.10. Average life expectancy in Côte d'Ivoire has increased

We collected opinions on the average life experience of the Ivorian population due to the environment. The responses are shown in the table below.

Table 15: Average life expectancy in Côte d'Ivoire has increased

Average life expectancy in Côte d'Ivoire has increased	Number of respondents	Percentage (%)
Strongly disagree	158	32
Disagree	89	24
Neutral	14	4
Strongly agree	35	16
Agree	89	24
Total	385	100

Source: Field data, 2023

Table 15 above reveals that 32% of respondents strongly disagree that Average life expectancy in Côte d'Ivoire has increased, 24% disagree, only 16% strongly agree, 24% agree and 4% remain neutral. Indeed, deforestation is a major problem in Cot d'Ivoire, leading to the loss of natural habitat for species and consequences for the local climate. Air and water pollution is also a growing concern, particularly in densely populated urban areas.

According to World Bank [WB] reports, life expectancy at birth in Côte d'Ivoire has risen from 36 years in 1960 to 57 years in 2021, as the country is making enormous efforts to comply with the general rules on mortality from birth. At this level, we are talking about the protection of Ivorian biodiversity and natural resources, not to mention the country's warm temperatures (27 degrees Celsius) and pleasant climate.

4.2.11. The rate of environment-related illnesses, such as respiratory diseases, has fallen

Once again, we used documentation to gather data from medical experts and local citizens. The following responses was obtained.

Table 16: The rate of environment-related illnesses, such as respiratory diseases, has fallen

The rate of environment-related illnesses, such as respiratory diseases, has fallen	Number of respondents	Percentage (%)
Strongly disagree	70	22,7
Disagree	50	17
Neutral	30	3,4
Strongly agree	165	34,1
Agree	70	22,7
Total	385	100

Source: Field data, 2023

Table 16 above reveals that 22.7% of respondents agree that the rate of environment-related illnesses, such as respiratory diseases, has fallen, 34.1% strongly agree, 22.7% strongly disagree, 17% disagree and only 3.4% remain neutral.

In Côte d'Ivoire, five neglected tropical diseases - lymphatic filariasis, soil-transmitted helminthiasis, schistosomiasis, onchocerciasis and trachoma - constitute a public health problem because of their morbidity and profound impact on poor populations, and the way they perpetuate the cycle of poverty. However, the government is making strenuous efforts, particularly with regard to water-borne traveler's disease and, since July 2023, dengue fever.

4.2.12. A large proportion of the Ivorian population has access to adequate sanitation and drinking water

With its real hydroelectric potential and divided rivers, we had to ask whether a large proportion of the Ivorian population has access to adequate sanitation and drinking water.

We collected the following opinions.

Table 17: A large proportion of the Ivorian population has access to adequate sanitation and drinking water

A large proportion of the Ivorian population has access to adequate sanitation and drinking water	Number of respondents	Percentage (%)
Strongly disagree	40	11,4
Disagree	87	17,1
Neutral	16	2,9
Strongly agree	137	40
Agree	105	28,6
Total	385	100

Source: Field data, 2023

Table 17 above reveals that 28.6% of respondents agreed that A large proportion of the Ivorian population has access to adequate sanitation and drinking water, 40% strongly agreed, 11.4% strongly disagreed, 17.1% disagreed and only 2.9% remained neutral.

First of all, the Côte d'Ivoire government has implemented several initiatives to improve access to quality healthcare and drinking water. One of these initiatives is the National Health Development Plan, which aims to strengthen the country's healthcare system by meeting international standards.

The government has also taken steps to improve access to drinking water in Côte d'Ivoire. The national water development plan aims to improve water supply infrastructure, promote water conservation and guarantee the availability of drinking water for the population. The government has invested in the construction of water treatment plants, the extension of water distribution networks and the introduction of water quality control systems.

Non-governmental organizations (NGOs) also play a crucial role in improving access to drinking water.

4.3. Findings related to the level of development of Côte d'Ivoire in relation to the political-administrative path of the environment sector

At this level, we are gathering information on the regulations governing the environment sector, its interaction with other sectors, and the working conditions of the people involved, particularly civil servants. The figure below shows the responses obtained using the different data collection methods.

4.3.1. The number of legal rules and programs in the environmental sector is limited and little known by ivoirian citizens

Because any institution must be organized around legal rules that are known to all, and more often than not, with programs and activities to reinforce their effectiveness, we thought we'd collect opinions on the population's knowledge of legal rules and environmental programs in Côte d'Ivoire. We obtained the following results.

Table 18: The number of legal rules and programs in the environmental sector is limited and little known by Ivorian citizens

A large proportion of the Ivorian population has access to adequate sanitation and drinking water	Number of respondents	Percentage (%)
Strongly disagree	50	10,8
Disagree	79	16,2
Neutral	11	2,7
Strongly agree	150	43,2
Agree	95	27
Total	385	100

Source: Field data, 2023

Table 18 above reveals that 27% of respondents agreed with the statement that the number of legal rules and programs in the environmental sector is limited and little known by Ivorian

citizens, 43,2% strongly agreed, 10,8% strongly disagreed, 16,2% disagreed and 10,8% remained neutral.

According to reports by the United Nations Environment Program, environmental regulations and programs in Côte d'Ivoire are limited. Despite its exceptional biodiversity, vast mineral deposits and significant revenues from cocoa and other exports, Côte d'Ivoire is not doing enough to protect the environment, compared with countries such as Rwanda. For example, although the country banned the production, sale and possession of plastic bags in 2013, there has been no improvement. This lack of enforcement undermines the effectiveness of the ban and contributes to plastic pollution.

Furthermore, although LOI n°98-755 du 23 décembre 1998 Portant Code de l'Eau prohibits the discharge of objects, waste and toxic products into marine and lagoon waters and coastal areas, the implementation and enforcement of this regulation is problematic.

4.3.2. The environment sector is last in the Ivorian administrative hierarchy

The importance of the environment is increasingly overlooked in developing countries. This consideration is at the root of the slow progress in the global fight against climate change. We have therefore gathered opinions on the sector's place in the Ivorian administrative hierarchy.

Table 19: The environment sector is last in the Ivorian administrative hierarchy

The environment sector is last in the Ivorian administrative hierarchy	Number of respondents	Percentage (%)
Strongly disagree	28	3,3
Disagree	70	6,7
Neutral	28	3,3
Strongly agree	170	53,3
Agree	89	33,3
Total	385	100

Source: Field data, 2023

Table 19 above reveals that 33,3% of respondents agreed with the statement that the environment sector is last in the Ivorian administrative hierarchy, 53,3% strongly agreed, 3,3% strongly disagreed, 6,7% disagreed and only 3,3% remained neutral.

In Côte d'Ivoire, as in many developing countries, economic priorities such as economic growth and job creation are often put first. This can lead to a lack of investment and attention to environmental issues. But then again, resources allocated to the environment are poorly managed.

Low public awareness of environmental issues also contributes to the neglect of this sector by all.

4.3.3. Conflict of jurisdiction between the environment and other sectors hampers administrative organization and strategic planning

It has become a tradition to assign similar and almost identical missions to several institutions in the same country. The target group, chosen as interlocutors, was kind enough to comment on the existence of a conflict of competence between the environment sector and other sectors, which hampers administrative organization and strategic planning. The following answers was obtained.

Table 20: Conflict of jurisdiction between the environment and other sectors hampers administrative organization and strategic planning

Conflict of jurisdiction between the environment and other sectors hampers administrative organization and strategic planning	Number of respondents	Percentage (%)
Strongly disagree	26	3,1
Disagree	26	3,1
Neutral	82	12,5
Strongly agree	156	50
Agree	95	31,3
Total	385	100

Source: Field data, 2023

Table 20 above reveals that 31,3% of respondents agreed with the statement that Conflict of jurisdiction between the environment and other sectors hampers administrative organization and strategic planning, 50% strongly agreed, 3,1% strongly disagreed, 3,1% disagreed and 12,5% remained neutral. Indeed, when other specific sectors, such as agriculture or industry, make decisions that favor their own development at the expense of the environment, this leads to environmental degradation, including deforestation, water and air pollution, and loss of biodiversity. There are also a large number of jurisdictional conflicts, leading to social tensions. And again, during our internship at the Ministry of the Environment and Sustainable Development, we noticed that the confusion in the assignment of missions to the different sectors raised many questions at the level of the international community, particularly when signing agreements for possible subsidies.

4.3.4. Civil servants looking for good working conditions in a dynamic environment don't want to work for the ministry of the environment

We asked whether civil servants looking for good working conditions in a dynamic environment don't want to work for the Ministry of the Environment. The answers listed in the following table were obtained, in particular, through a rich sharing of experiences.

Table 21: Civil servants looking for good working conditions in a dynamic environment don't want to work for the ministry of the environment

Civil servants looking for good working conditions in a dynamic environment don't want to work for the ministry of the environment	Number of respondents	Percentage (%)
Strongly disagree	33	3,4
Disagree	33	3,4
Neutral	33	3,4
Strongly agree	184	55,2
Agree	102	34,5
Total	385	100

Source: Field data, 2023

Table 21 above reveals that 34,5% of respondents agreed with the statement that civil servants looking for good working conditions in a dynamic environment don't want to work for the Ministry of the Environment, 55,2% strongly agreed, 3,4% strongly disagreed, 3,4% disagreed and only 3,5% remained neutral.

Since one works, to enjoy the fruits of one's efforts, civil servants and other stakeholders are reluctant to work at the Ministry of the Environment or any other related institution, mainly because of the absence or inadequacy of bonuses. Another argument lies in the difficult working conditions and the sector's insufficiently significant impact on environmental challenges.

CHAPTER V: SUMMARY OF THE FINDINGS, GENERAL CONCLUSION AND RECOMMENDATIONS

5.0. Introduction

At the end of this analysis, it seems appropriate to summarize this research, draw a general conclusion and then focus on recommendations to raise the environmental sector's profile.

5.1. Summary of findings

After Having listed the general characteristics of the respondents in section 4.1, it is clear that the selection of the target population was well done and the sampling technique well-chosen and applied. This is because there was no discrimination in terms of gender representativeness: both men and women actively participated in the survey. The age and marital status of the vast majority of respondents, as well as their level of expertise in the field covered by our study, reflects the originality and veracity of the data.

The following remarks can be made after examining the various tables in part 4.2 with tables which are representing the link between the environment sector and social development in Côte d'Ivoire:

Table 5 present the number of environmental players in Côte D'Ivoire. 30% of environmental sector players are registered within the [MINEED] Ministry of the Environment and Sustainable Development, with strong representation within other ministries and international participation of 20% each. Civil society, the private sector and deconcentrated and decentralized entities do not remain on the sidelines, with a concentration of actors for a percentage of 10% each.

Table 6 present the existence of a multitude of players in the environmental sector operating in all the specific environment-related fields of air, soil, forests, water resources, the marine and coastal environment, biodiversity, the urban environment, health and natural resources.

Figure 2 Present the Period of creation of institutions. 30% of environmental players have taken up their positions since 1964, when the institutions to which they belong were created, compared with 40% and 30% between 1954 and 2023. Without asserting that environmental considerations did not previously exist.

Table 7 present the location of Institutions. It shows that a large proportion of the above-mentioned structures are located in the Abidjan area, with strong local representation, while the others are located throughout Côte d'Ivoire, with their headquarters outside the country.

Figure 3 is the first of a group which concern the link between environment sector and development in Côte d'Ivoire. This particular figure present Côte d'Ivoire's environmental sector like a source of revenue and a promoter of foreign investment. It reveals that 35.3% of respondents agreed that Côte d'Ivoire's environmental sector is a source of revenue and a promoter of foreign investment, 23.5% strongly agreed, only 11.8% strongly disagreed, 17.6% disagreed and 11.8% remained neutral.

Table 8 present Tourism booms in Côte d'Ivoire like a consequence to environmental promotion. It reveals that 26.1% of respondents agreed that Tourism booms in Côte d'Ivoire thanks to environmental promotion, 43.5% strongly agreed, only 8.7% strongly disagreed, 13% disagreed and 8.7% remained neutral.

Table 9 present the answers about the fact that the rate of environmental research in Côte d'Ivoire is growing rapidly. It reveals that 20% of respondents agreed that the rate of environmental research in Côte d'Ivoire is growing rapidly, 30% strongly agreed, 30% strongly disagreed, 13.3% disagreed and 6.7% remained neutral.

Table 10 ask opinions about the fact that Environment in Côte d'Ivoire is a factor in agricultural development. It reveals that 45.5% of respondents agreed that Environment in Côte d'Ivoire is a factor in agricultural development, 27.3% strongly agreed, only 9.1% strongly disagreed, 9.1% disagreed and a further 9.1% remained neutral.

Table 11 try to have opinions on the fact that the environment in Côte d'Ivoire is a factor in the fall in raw material prices on Côte d'Ivoire market. It reveals that 41.7% of respondents strongly disagree that the environment in Côte d'Ivoire is a factor in the fall in raw material prices on the Côte d'Ivoire market, 25% b disagree, only 8.3% strongly agree, 16% agree and 8.3% remain neutral.

Table 12 represent opinions about infant mortality rate in Côte d'Ivoire. It reveals that 27.3% of respondents agreed that the infant mortality rate in Côte d'Ivoire has fallen, 45.5% strongly agreed, only 9.1% strongly disagreed, 9.1% disagreed and 9.1% remained neutral.

Table 13 represent opinions about Average life expectancy in Côte d'Ivoire. It reveals that 32% of respondents strongly disagree that Average life expectancy in Côte d'Ivoire has increased, 24% disagree, only 16% strongly agree, 24% agree and 4% remain neutral.

Table 14 represent opinions about the rate of environment-related illnesses, such as respiratory diseases in Côte d'Ivoire. It reveals that 22.7% of respondents agree that the rate of environment-related illnesses, such as respiratory diseases, has fallen, 34.1% strongly agree, 22.7% strongly disagree, 17% disagree and only 3.4% remain neutral.

Table 15 ask the question to know if a large proportion of the Ivorian population has access to adequate sanitation and drinking water. It reveals that t 28.6% of respondents agreed that A large proportion of the Ivorian population has access to adequate sanitation and drinking water, 40% strongly agreed, 11.4% strongly disagreed, 17.1% disagreed and only 2.9% remained neutral.

The following tables are representing the level of development of Côte d'Ivoire in relation to the political-administrative and legal path of the environment sector:

Figure 16 tried to know if the number of legal rules and programs in the environmental sector is limited and little known by Ivorian citizens. It reveals that 27% of respondents agreed with the statement that the number of legal rules and programs in the environmental sector is limited and little known by Ivorian citizens, 43,2% strongly agreed, 10,8% strongly disagreed, 16,2% disagreed and 10,8% remained neutral.

Table 17 tried to know the position of environment sector in Ivorian administrative hierarchy. It reveals that at 33,3% of respondents agreed with the statement that the environment sector is last in the Ivorian administrative hierarchy, 53,3% strongly agreed, 3,3% strongly disagreed, 6,7% disagreed and only 3,3% remained neutral.

Table 18 represent opinions about conflict of jurisdiction between the environment and other sectors and its consequences. It reveals that 31,3% of respondents agreed with the statement that Conflict of jurisdiction between the environment and other sectors hampers administrative organization and strategic planning, 50% strongly agreed, 3,1% strongly disagreed, 3,1% disagreed and 12,5% remained neutral.

Table 19 asked the question why Civil servants looking for good working conditions in a dynamic environment don't want to work for the Ministry of the Environment. The responses reveals that 34,5% of respondents agreed with the statement that civil servants looking for good working conditions in a dynamic environment don't want to work for the Ministry of the Environment, 55,2% strongly agreed, 3,4% strongly disagreed, 3,4% disagreed and only 3,5% remained neutral.

The results show that, faced with the challenge of the proper use of water, the depletion of coastal zones, the loss of biodiversity, the modification of cropping seasons and the accentuation of drought, Cote d'Ivoire, like several other countries, has taken initiatives with

the aim of resolutely committing itself to achieving the Sustainable Development Goals by 2030. The country ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1994, and the Kyoto Protocol in 2005. Subsequently, Côte d'Ivoire joined the Clean Development Mechanism (CDM) in 2005, the REDD+ mechanism in 2012 and the Climate and Clean Air Coalition (CCAC) in 2012. Faced with the main objective of the Paris Agreement, which is to keep global warming "well below" 2°C, while striving to limit it to 1.5°C, Cote d'Ivoire has adopted a low-carbon development trajectory. It is therefore obvious that the country is particularly interested in climate change issues, to the point of submitting three (3) National Communications on climate change, successively in 2000, 2010 and 2017, with a Fourth National Communication (QCN) currently in preparation. After submitting its first Nationally Determined Contributions [NDCs] in 2015 to the United Nations Framework Convention on Climate Change [UNFCCC] with the aim of reducing greenhouse gas (GHG) emissions by 28.25%, the country is back with its revised Nationally Determined Contributions (NDCs) for the period 2021-2030. By including the forestry sector not covered by the first Nationally Determined Contributions of 2015, and with a new greenhouse gas (GHG) emissions reduction target of 30.41%, at an estimated overall cost of twenty-two (22) billion US dollars, the country intends to respond to the call for greater climate ambition, by raising its mitigation targets, strengthening its adaptation limits and accelerating forestry, land and energy reforms to make an effective contribution to the fight against poverty. To underline its determination, the country has opted for an energy mix that includes a high proportion of renewable energies (45%) and natural gas-fired power stations, rather than coal-fired power stations. What's more, it's the resilience of vulnerable groups that is highlighted by the promotion of green jobs.

At this level, we need to talk about national documentation which provides us with secondary data that are crucial to the outcome of our analysis.

(i) To bring about more recent results in environmental policy in the Côte d'Ivoire, we have noted considerable progress in the examination of the project for a new environmental code in the Côte d'Ivoire, which was adopted by the National Assembly's Commission for Research, Science, Technology and the Environment (CRSTE) on Thursday June 01, 2023, following a presentation of its major innovations by the Minister for the Environment and Sustainable Development. It emerged from this speech that the code aims to set up an agency in charge of national environmental and sustainable development policy, with its own legal personality, financial autonomy, assets and management resources, in place of the Agence Nationale de l'Environnement (ANDE), a simple administrative public body. We will also have an Environment and Sustainable Development Fund (FEDD) which will take into account the major environmental sectors, namely climate change, biodiversity, elimination, the coastline, chemical products and substances, replacing the FNDE [National Development Fund].

(ii) On the other hand, in terms of environmental management tools, the bill improves on existing mechanisms by emphasizing the social aspect, in order to take gender into account and involve communities in the definition of development projects. As mechanisms. These include the Environmental and Social Impact Assessment (ESIA) and the Environmental and Social Audit (ESA). It also introduces a new tool, the Strategic Environmental and Social Assessment (SESA).

Last but not least, the Code gives pride of place to waste management, specifically household and similar waste, industrial, commercial and artisanal waste from all production processes, sanitary waste, waste from electrical and electronic equipment, and hazardous waste characterized by its generally toxic nature. The provisions take into account chemical

substances such as persistent organic pollutants, laminating chemical substances, as well as radioactive materials and heavy metals such as mercury, lead, cyanide and uranium. Their import and use are regulated in order to control the situation and, ultimately, facilitate their elimination according to the best environmental practices indicated in the text.

(iii) Another recent advance has been the implementation of measures to combat desertification, soil degradation and drought in Côte d'Ivoire. With forest cover estimated at 16 billion hectares in 1960, compared with 2.97 million in 2021, several national Ivorian organizations, companies and educational institutions are planting trees on a personalized schedule to help achieve the forest cover target of 6.5 million hectares by 2030.

-A periodical from a specialized magazine, a doctoral thesis or dissertation, a patent, statistical data, an image, a computer graphics, an official document (law, decree, regulation, public contract).

(iv) It is with this in mind that Côte d'Ivoire, as a coastal, port and flag country, having ratified and acceded to several regional and international instruments including the United Nations Convention on the Law of the Sea, the Convention on Biological Diversity and the FAO Code of Conduct for Responsible Fishing, has chosen to proceed with a seasonal closure of sea fishing with the aim of preserving fish stocks and guaranteeing their reconstitution under normal natural conditions free from fishing. This initiative is justified by the fact that the country's sea fishing production has fallen from 69,769 tonnes in 2003 to 42,738 tonnes in 2020, a drop of 38.75 %.

(v) The Ivorian government has reaffirmed its commitment to the fight against pollution by organizing the 50th anniversary of World Environment Day on June 5, 2023, in collaboration with the African Development Bank, the United Nations Environment Programme (UNEP) and the Netherlands. Côte d'Ivoire is a strong supporter of the African Development Bank's special programs and initiatives contributing to environmental management and

sustainability. Two such initiatives are the African Circular Economy Alliance (ACEA) and the African Circular Economy Facility (ACEF), which aim to promote circularity and the sound management of waste - including plastics - in Africa. With the theme of "Solutions to plastic pollution", the event was an opportunity for all stakeholders to review existing innovative management and recycling solutions. In particular, it was an opportunity for Côte d'Ivoire to recall the existence of its decree N°2013-327 of May 22, 2013 banning the production, import, marketing, detention and use of plastic bags. This will soon be accompanied by the new environmental code, which is considered more coherent and incentive-based insofar as it emphasizes extended producer responsibility and the full application of the polluter-pays principle to all, without exception.

5.2. Conclusion

The analysis presented in this dissertation focuses on the foundations of the institutional evolution of the environmental sector in the development process in Côte d'Ivoire. The issue of the impact of sectors such as the environment on Ivorian growth at all levels is highlighted.

Indeed, many positive indicators have been identified in this dissertation, and the analysis of the results is unequivocal: although many challenges remain, Côte d'Ivoire's environmental sector is making a real contribution to the country's development.

This was a truly scientific exercise, as we first had to identify the players in Côte d'Ivoire's environmental sector who, through their synergies, have created an atypical trajectory justified by policies observed under different political regimes.

This retrospective was the perfect opportunity to formulate arguments on the economic, social, legal and politico-administrative path of the environmental sector in Côte d'Ivoire.

It was without any ambiguity, that we realized that with a true national legal system translated at the sectoral level, Côte d'Ivoire, by means of techniques of good governance and

new public administration, in collaboration with civil society and international organizations, after having adhered to the objectives of Sustainable Development, is constantly elaborating strategies.

5.3. Recommendations

The formula of accelerated change ($V \times P^2 \times A \times T = C$) presented by Juvenal Turatsinze in his analysis of Rwanda's development history reflects the involvement of two main players, the leader and the people, in the quest for sustainable development, with two inescapable factors: action over time (juvenal Turatsinze, 2018, La formule du changement accéléré, Rwanda success story). This formula is the key to success in any political system, and eventually in any sector that is an integral part of the national administration in a given country. Before being the prerogative of civil society through associations and international and regional cooperation, trade unions and local groups, the environment sector in Côte d'Ivoire is the business of the government.

In legal terms, national legislative texts are outdated and correspond to a period different from the current century with its realities. Through the new Environmental Code project and the adoption of the roadmap for the development of environmental statistics in Côte d'Ivoire, the government must ensure that there is genuine synergy between the various ministerial departments in the collection and analysis of environmental data. With the technical means, financial resources and personnel highly qualified in environmental statistics, it is up to the Ivorian Ministry of the Environment and Sustainable Development in particular to assume this task of coordination and collaboration. This legal corpus should also provide a framework for the ongoing formulation, revision and updating of data at both central and local levels, to enhance environmental protection.

At institutional level, although there is genuine multi-sectoral collaboration on environmental concerns, policy implementation can only be achieved through an executive body to support the Ministry - the Ivorian Ministry of the Environment - in its role as "design and coordination body". This body is none other than the Direction des Etudes, de la Planification et des Statistiques, which, through its sub-affiliated structures, must:

- Continuously make proposals to the government concerning environmental policies and strategies, and the ratification of international conventions, backed up by sustainable implementation measures without which the objectives cannot be achieved.

- There is a need to integrate the environmental strategy into the National Development Plan to ensure greater consistency in actions aimed at the rational use of environmental resources based on sustainable production, in order to well-being in Côte d'Ivoire.

At the level of civil society and the private sector, the Ivorian government must give pride of place to all environmental non-governmental organizations, by providing a framework for training and capacity-building so that they can better assume their role as environmental responsibility monitors for industrial, commercial and industrial companies, while at the same time denouncing the difficulties faced by local populations and the underprivileged.

In terms of monitoring and evaluation, there needs to be real organization at government level in terms of assigning responsibility for environmental issues. As the main processing centre for environmental data, the Ivorian Ministry of the Environment and Sustainable Development must be the first to be cited and called upon when it comes to planning, monitoring and evaluating environmental programs.

The place of the Ministry of the Environment and Sustainable Development in the Ivorian inter-ministerial order of priorities needs to be reviewed, given that the strategies emerging from it guarantee genuine protection of the national commons (water, air and oceans).

The staff of the Ministry of the Environment, through its attached and sub-attached structures, its central, general and regional departments, like those in all other sectors, must, from the start of their training, benefit from rigorous training in strategic planning to ensure that all pre-existing policies, those under development and those in the evaluation phase, achieve their objectives with regard to previously established success indicators. These skills will be put to better use in the existing sectoral monitoring and evaluation system.

Because the best strategies are based on real data, the environment sector, and in particular the body responsible for policy planning, the Direction des Etudes, de la Planification et des Stratégies, must be given all the technical means available and sufficient financial resources to solicit, verify and analyse environmental data from all ministerial departments and local authorities.

In terms of decentralization, Côte d'Ivoire, having opted for a policy of decentralization and good governance through Law N° 2012-1128 of december 13, 2012 portant. organisation des collectivites territoriales, still needs to make efforts in terms of granting financial freedom and legal responsibility to decentralised entities. To ensure that principles such as the "polluter pays" principle, enshrined in the Ivorian environmental code of October 3, 1996 and renewed in the new code, are effective throughout the country, districts, towns, schools, the media, the police, civil society and neighbourhood and village communities need to be involved through training and the introduction of measures such as free, well-maintained public toilets at every crossroads, or the free use of toilets in nearby businesses.

This implies, in particular, solutions for waste collection in the streets, institutions and public transport, with means of repression such as an anti-pollution brigade responsible for enforcing the said principle or, where appropriate, for ensuring the public punishment of offenders, to serve as an example to the population. This strategy has been tried and tested in Rwanda, an East African country now ranked as the cleanest in Africa. The country has

adopted a combination of policies that include a ban on plastic bags; law enforcement; a collective national consciousness of keeping the streets clean; and 'a monthly national practice called UMUGANDA (community work), during which the President, His Excellency, Mr Paul KAGAME takes to the streets himself with a shovel.

5.4. Area for further study

The challenge for researchers is to better assess the impact of sectors in a given country. We have examined environmental development theories, political, judicial and administrative initiatives, as well as the ways in which civil society, in collaboration with the government, is helping to model the environmental sector in Côte d'Ivoire.

Research into the impact of the sector under analysis on development in Côte d'Ivoire is still in its infancy, and remains a challenge. Many more research studies, program evaluations and awareness-raising initiatives are needed to determine the most effective actions for the sector's development.

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APPENDICES

APPENDIX 1: CONSENT FORM

KIGALI INDEPENDENT UNIVERSITY ULK
SCHOOL OF POSTGRADUATE STUDIES
DEPARTMENT OF DEVELOPMENT STUDIES

Dear Respondent,

I am a PhD student at Kigali Independent University and I am doing my research Academic research on the topic “**Institutional development of the environmental sector in the development process of Côte d’Ivoire**”. In response to this research topic, some questions were raised. The purpose of collecting data that will contribute to the success of the study. So, I would like to ask you to fill in the questionnaire and express your opinions on various aspects. This study will be of great value to the research and all the information provided in it. Your responses to this questionnaire will be treated with the utmost confidentiality.

Please take a few minutes to answer me. I assure you that the information provided here will be used solely for the purposes of this study and your Anonymity is absolutely guaranteed.

Thank you!

DJIPROH Brah Maria.

APPENDIX 2: SURVEY QUESTIONNAIRE

INSTRUCTION

Rubrique 1 sur 4

Please Put A Tick On The Appropriate Answer In The Proposed Box Or Fill In The Space Provided

1. Diversity of institutions

- The Ministries and structures of State
- local authorities
- The Ivorian Ministry of the Environment
- Civil Society Organization
- Private sector
- International Cooperation

2. Period of creation of institutions in the preceding order

Short answer.....

3. Location of institutions cited in the first question

Short answer.....

Rubrique 2 sur 4

SD stands for Strongly Disagree; D stands for Disagree; N stands for Neutral; A stands for Agree and SA stands for Strongly Agree

The environment sector and development in Côte d'Ivoire

S/N		SD	D	N	A	SA
	Côte d'Ivoire's environmental sector is a source of revenue and a promoter of foreign investment					
A	Promote revenue					
B	Promote foreign investissements					
	Tourism booms in Côte d'Ivoire thanks to environmental promotion					

A	Promotion of the country's environment and natural attractions					
B	The natural beauty of its national parks, beaches and nature reserves					
C	National policies which promote sustainable and responsible tourism					
D	Investments in the construction of lodges and ecolodges in natural areas					
E	Promotion of nature-based tourism					
F	organization of environmental and conservation events and festivals					
S/N		SD	D	N	A	SA
	The rate of environmental research in Côte d'Ivoire is growing rapidly					
A	Large number of conferences, seminars and events related to the environment					
B	Government policies and initiatives to promote environmental research					
C	Numerous research programs					
D	Lack of funding and national and international subsidies					
S/N		SD	D	N	A	SA
	Environment in Côte d'Ivoire is a factor in agricultural development					
A	National policies for sustainable agricultural practices					
B	Training, awareness-raising and incentives to create agricultural markets					

C	Bad management of agricultural waste					
D	Lack in the using of renewable energy					
S/N		SD	D	N	A	SA
	The environment in Côte d'Ivoire is a factor in the fall in raw material prices on the Côte d'Ivoire market					
A	Agricultural products are increasingly expensive because of the cost of transporting goods over relatively long					
B	Agricultural products are increasingly expensive because of the unsealed routes					
C	Agricultural products are increasingly expensive because of the relatively low cost of supply compared with the high rate of demand					
D	Agricultural products are increasingly expensive because of the high production costs					
S/N		SD	D	N	A	SA
	The environment in Côte d'Ivoire is a factor in the fall in raw material prices on the Côte d'Ivoire market					
A	Agricultural products are increasingly expensive because of the cost of transporting goods over relatively long					
B	Agricultural products are increasingly expensive because of the unsealed routes					
C	Agricultural products are increasingly expensive because of the relatively low cost of supply compared with the high rate of demand					
D	Agricultural products are increasingly expensive because of the high production costs					

Rubrique 3 sur 4

The environment sector and social development in Côte d'Ivoire

S/N		SD	D	N	A	SA
	The infant mortality rate in Côte d'Ivoire has fallen					
A	Increased access to drinking water and sanitation					
B	water-related illnesses affecting the health of infants are reduced					
C	Physical and online awareness campaigns for infant hygiene					
S/N		SD	D	N	A	SA
	Average life expectancy in Côte d'Ivoire has increased					
A	Deforestation and lead to the loss of natural habitat for species and consequences for the local climate					
B	Air and water pollution is growing					
C	There are enormous efforts to comply with the general rules on mortality from birth					
D	The country has warm temperatures and pleasant climate.					
S/N		SD	D	N	A	SA
	The rate of environment-related illnesses, such as respiratory diseases, has fallen					
A	No, because of five neglected tropical diseases					
B	There are several public policies that solve the problems in this area					

S/N		SD	D	N	A	SA
	A large proportion of the Ivorian population has access to adequate sanitation and drinking water					
A	There are several national initiatives to improve access to quality healthcare and drinking water					
B	Governments investments in the construction of water treatment plants, the extension of water distribution networks and the introduction of water quality control systems					
C	NGO support					

Rubrique 4 sur 4

The political, administrative and legal framework of the environment sector in Côte d'Ivoire

S/D		SD	D	N	A	SA
	The number of legal rules and programs in the environmental sector is limited and little known by Ivorian citizens					
A	Environment Program, environmental regulations and programs in Côte d'Ivoire are limited					
B	Lack of efforts to protect the environment, compared with countries such as Rwanda					
C	difficulties in enforcing laws					
S/D		SD	D	N	A	SA
	The environment sector is last in the Ivorian administrative hierarchy					
A	Economic priorities such as economic growth and job creation are put first					
B	Resources allocated to the environment are poorly managed					
C	Difficulties in enforcing laws					

D	Low public awareness of environmental issues					
S/D		SD	D	N	A	SA
	Conflict of jurisdiction between the environment and other sectors hampers administrative organization and strategic planning					
A	Other specific sectors make decisions that favor their own development at the expense of the environment					
B	A large number of jurisdictional conflicts, leading to social tensions					
C	Difficulties in enforcing laws					
D	The confusion in the assignment of missions to the different sectors raised lot of issues					
S/D		SD	D	N	A	SA
	Civil servants looking for good working conditions in a dynamic environment don't want to work for the Ministry of the Environment					
A	The absence or inadequacy of bonuses like first cause					
B	The difficult working conditions					
C	The sector's insufficiently significant impact on environmental challenges					
D	The confusion in the assignment of missions to the different sectors raised lot of issues					

Thank you for your response.

APPENDIX 3: INTERVIEW GUIDE

- 1] Which institution do you work for?
- 2] The environment represents the global individis (water, air and soil). Do you agree with this definition?
- 3] Is the environment important to human beings?
- 4] Do you believe that the Ivorian environment sector is a benchmark like other sectors, particularly the economic sector?
- 5] Have you ever taken part in an environmental activity or program in Côte d'Ivoire?
- 6] Do you consider the environmental sector in Côte d'Ivoire to be dynamic?
- 7] Do you find the number of environmental activities, programs and events in Côte d'Ivoire sufficient?
- 8] Do you find it reasonable that the Ministry of the Environment and Sustainable Development is at the bottom of the Ivorian administrative hierarchy?
- 9] If you had to make this choice, would you prefer to work for the Ministry of the Environment or the Ministry of Economy and Finance?

Thank you for your time.

APPENDIX 4: MAP OF ABIDJAN

