



Carbon Neutrality and Justice in West African Countries: The Case of Côte d'Ivoire

Dro Hyacinthe Diomandé

Department of Public Law, University of Jean Lorougnon Guède of Daloa, Daloa, Côte d'Ivoire

Email: didro2017@gmail.com

How to cite this paper: Diomandé, D.H. (2026) Carbon Neutrality and Justice in West African Countries: The Case of Côte d'Ivoire. *Open Access Library Journal*, 13: e14911.

<https://doi.org/10.4236/oalib.1114911>

Received: January 21, 2026

Accepted: February 7, 2026

Published: February 10, 2026

Copyright © 2026 by author(s) and Open Access Library Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

Carbon neutrality, achieved by balancing anthropogenic GHG emissions and removals, offers a pathway to minimise climate impacts and foster a just transition to low-carbon economies. However, achieving carbon neutrality in West Africa requires an explicit integration of environmental-justice considerations that equitably distribute burdens and benefits among societal groups. Environmental justice demands that the burdens and benefits of transitioning towards carbon neutrality are equitably distributed among different societal groups. Historically, these countries have contributed minimally to global carbon emissions but often bear a disproportionate brunt of the consequences. Thus, any carbon neutrality efforts must prioritize addressing the needs and vulnerabilities of marginalized communities, ensuring that they are not further marginalized in the transition process. Côte d'Ivoire's aspirations for economic growth and poverty alleviation are juxtaposed with the global imperative of carbon neutrality, necessitating a thorough analysis of justice considerations within its unique social, economic, and environmental landscape. Côte d'Ivoire stands at a crossroads, striving to balance substantial carbon emissions arising from sectors like energy, agriculture, deforestation, with its commitment to social equity and environmental. The concept of carbon neutrality offers a potential solution, though it requires careful scrutiny to ensure that benefits and burdens are equitably shared in the Society. Achieving carbon neutrality entails protecting and restoring these ecosystems, which is closely tied to the well-being of indigenous and local communities. Justice considerations require their active participation and inclusion in forest management. Côte d'Ivoire is already experiencing climate change impacts, such as sea-level rise and erratic weather patterns. Just transition strategies should encompass climate adaptation efforts that safeguard vulnerable communities and promote resilience, particularly among women and marginalized group. Achieving carbon neutrality necessitates international collaboration and financial support. Ensuring justice in this context involves advocating for fair climate financing mechanisms that priori-

tize the needs of developing countries like Côte d'Ivoire. The case of Côte d'Ivoire exemplifies the intricate interplay between carbon neutrality and justice within the specific dynamics of a West African nation. This study examines the intricate relationship between carbon neutrality justice in the specific context of Côte d'Ivoire, an African country facing the dual challenges of sustainable development and climate change. To reach this goal, we are going to base our analysis on juridical, economic and social approaches.

Subject Areas

Law

Keywords

Carbon Neutrality, Justice, Low-Carbon Economies

1. Introduction

The discourse on the energy situation in Africa is taking into account the diverse and unique factors that play important role in each region and each country. Situations in the continent such as population growth, economic growth, and access to energy, energy poverty, energy consumption, political instability and vast natural resources are key parameters that have been investigated in different studies concerning the analysis of energy scenarios and development of energy strategies and solutions. Africa is the second most populous continent after Asia and is currently characterized by a high rate of population growth which started in the second half of the 20th century.

This document is a normative and legal analysis that crosses three types of sources: the binding instruments ratified by Côte d'Ivoire in terms of climate (UN-FCCC, Kyoto Protocol, Paris Agreement and related decisions of the COP); the national planning documents in force between 2020 and 2022 (Revised NDC 2021, National low carbon strategy 2021-2025, National Adaptation Plan 2022, National Development Plan 2021-2025); and the ECOWAS regional directives (Renewable Energy Policy 2013; Regional Climate Strategy 2022). Only documents accessible to the public in French or English, officially adopted by the competent authority and dated 2015 or later have been preserved. No primary empirical data have been collected; but all quantitative figures (GHG targets, investment costs) are extracted *verbatim* from the official documents cited.

According to an analysis by United Nations, the population grew from 230 to 810 million, for which Eastern, Middle and Western African regions increased by 2.5%.

The 2015 Paris Agreement marked a major milestone in the global promotion of transition to a low-carbon economy. Parties to the Paris agreement are anticipated to fast-track transition from unsustainable energy regimes to a net-zero carbon emission status by mid-century [1]. As a signatory to the Paris agreement,

Côte d'Ivoire acknowledges that transition to carbon neutrality is fundamental to achieving sustainable economic growth [2]. Côte d'Ivoire president at the COP26 meeting in Glasgow announced Côte d'Ivoire's commitment to transitioning its carbon economy to reach net-zero by 2060. In doing so, the President also highlighted some difficulties which lie on the country's carbon transition pathway to include among others, the need for greater international finance and technical partnership, and Côte d'Ivoire's reliance on fossil fuel (especially gas) to drive the energy sector of the economy [3]. He also made another announcement this time on the occasion of the 72nd Session of the United Nations General Assembly in these terms:

“Climate change is a real concern (...) we must act quickly and responsibly, if we want to preserve our living environment and our planet”.

This statement made by Mr. Alassane Ouattara, President of the Republic of Côte d'Ivoire, on the occasion of the 72nd Session of the United Nations General Assembly¹, held in September 2017, inspires all the climate action of the Ivorian Government. In this way, the country aims to reduce its greenhouse gas emissions by 30.41% by 2030, relative to business as usual, or 98.95% with international support. Côte d'Ivoire also plans to implement additional mitigation measures in the Food and Land Use sector and include new greenhouse gases in its climate ambition [4].

The objective of this reflexion is to show that the importance to preserve the environment can lead to the reduction of the harmful impacts of climate change on the national economy and to the improvement of the living conditions of the populations in countries like Côte d'Ivoire. Therefore, the main question is how can carbon neutrality contribute to justice in West African Countries, especially in the case of Côte d'Ivoire in the way to improve the living conditions of the populations?

For the answer to this question, we are going firstly to see the Carbon Neutrality and Social Justice as two notions guaranteed by legal current texts in this country and secondly, deal with carbon neutrality and Social Justice as a synchronism undermined by climate change and justice.

2. Carbon Neutrality and Social Justice: A Harmony Guaranty by Legal Current Texts

Côte d'Ivoire is proud to present its revised Nationally Determined Contributions (NDCs) for the period 2021-2030. It thus reaffirms its commitment to contribute to the global effort to reduce Greenhouse gases. This commitment is reflected in its policy of restoring and preserving its forest massif, its energy potential with its hydrographic network, its combined cycle natural gas power plants and the increased use of renewable energies. As a result, this country has all the potential to become a real carbon sink. The revised NDCs present an unconditional mitigation target of 30.41%, corresponding to a reduction of thirty-seven (37) million tonnes

¹72nd Session of the United Nations General Assembly, held in September 2017.

of CO₂ equivalent by 2030 compared with the reference scenario; while the conditional target has been raised to 98.95% (unconditional and conditional measures) by 2030 compared with the reference scenario. This new target marks an exceptional increase in mitigation ambition compared with the first version of the NDCs, while at the same time clearing the way for unconditional net-zero CO₂ emissions by 2060 (COP26 pledge); a conditional 98.95% reduction trajectory (carbon neutrality from 2030) is possible only with international support of USD 22 billions of dollars.

2.1. A Balance between Carbon Neutrality and Social Justice Guaranteed by International Legal Documents

Carbon neutrality and social justice are important concepts that have been framed by several international texts as COP26 of 2 November 2021 in Glasgow. Côte d'Ivoire pledged net-zero CO₂ emissions by 2060 by participating actively to this event. In fact, the French Economic, Social and Environmental Council (CESE) has examined the draft law on combating climate change and building resilience to its effects. The aim of this law is to achieve the objectives set at national and international level, in a spirit of social justice. In Côte d'Ivoire, the National Low-Carbon Strategy (SNBC) sets a target of a 40% reduction in national greenhouse gas (GHG) emissions by 2030, as a prelude to net-zero CO₂ emissions by 2060 [5].

Our planet is currently facing major environmental problems, such as the degradation of coastal zones, loss of biodiversity, changes in cropping seasons and increasing drought. The current economic development model, which relies on conventional energies without taking into account the principles of sustainable development, is likely to cause major damage to the environment [6]. On the other hand, a more responsible, low-carbon economic development policy could help limit negative environmental impacts and guarantee a more viable planet for future generations. Aware of these challenges, Côte d'Ivoire ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1994, as well as the Kyoto Protocol in 1995 [7]. 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. With the end of the Kyoto Protocol's commitment period, the Paris Agreement was adopted. Its main objective is to keep the global temperature increase "well below" 2°C, while striving to limit it to 1.5°C. Côte d'Ivoire is resolutely committed to contributing to the achievement of this global objective, not only by taking into account the challenges of structural transformation of its economy and sustainable development, but also by adopting a low-carbon development trajectory in a context of post-Covid economic recovery. In addition, there are other legal international documents that contribute to achieving a balance between carbon neutrality and social justice in the country, Côte d'Ivoire is a signatory to the Paris Agreement, which aims to limit global warming to well below 2 degrees Celsius and pursue efforts to limit the temperature increase to 1.5 degrees Celsius. The agreement recognizes the im-

portance of both environmental and social concerns and calls for a just transition towards low-carbon and climate-resilient development.

Côte d'Ivoire also, like other countries, is committed to achieving the SDGs (Sustainable Development Goals), which include goals relating to both environmental sustainability (Goal 13: Climate Action) and social justice (Goal 5: Gender Equality, Goal 10: Reduced Inequalities). The SDGs emphasize the integration of environmental, social, and economic dimensions in development initiatives [8].

2.2. A Eurhythmia between Carbon Neutrality and Social Justice Reinforced by National Texts and Programmes

Côte d'Ivoire has developed a National Environmental Policy that aims to promote sustainable development, protect natural resources, and ensure environmental conservation. This policy provides a framework for addressing environmental challenges while considering social and economic aspects [9].

In order to take gender-related issues into account in climate action in accordance with the provisions of the United Nations Framework Convention on Climate Change (UNFCCC), the Ministry of the Environment and Sustainable Development (MINEDD), has developed initiatives to mobilize and engage key stakeholders at the national level, which resulted in the development in 2019 of a National Gender and Climate Change Strategy (2020-2024). It should be noted, among other things, the establishment of mechanisms for discussion, sharing of experiences and capacity-building on the link between gender and climate, which have led to a "structured dialogue". This dynamic is reinforced by a Memorandum of Understanding signed by the Minister of the Environment and Sustainable Development and the Minister of Women, Family and Children, on October 25, 2021. This high-level political commitment aims to strengthen the advocacy process for the systematic integration of the gender and climate nexus in sectoral planning, strategic and policy documents at national level. As part of the integration of the gender and climate theme, gender is taken into account in a transversal way across all the priority sectors identified within the framework of the NDCs. Thus, the aim is to analyse: in terms of mitigation, the differentiated responsibility of men and women in the mechanisms of emissions and/or reduction of Greenhouse Gases and in terms of adaptation, the differentiated situation of men and women in relation to vulnerability risks and impact chains in order to strengthen the gender component in the National Adaptation Plan.

Climate change is already affecting the entire world, with extreme weather conditions such as drought, heat waves, heavy rain, floods and landslides becoming more frequent, including in Europe [10]. Other consequences of the rapidly changing climate include rising sea levels, ocean acidification and loss of biodiversity. In order to limit global warming to 1.5 degrees Celsius—a threshold the Intergovernmental Panel for Climate Change (IPCC) suggests is safe—carbon neutrality by mid-21st century is essential. This target is also laid down in the Paris agreement signed by 195 countries, including Côte d'Ivoire. This country, like the

countries Party to the United Nations Framework Convention on Climate Change (UNFCCC), continues to reiterate its commitment to work with all countries to achieve the objectives of the said Convention, enshrined in Article 2 and reinforced by Article 2 of the Paris Climate Agreement. Thus, Côte d'Ivoire's action on climate change is based on a common vision which is to "set up a sustainable socio-economic development framework that integrates the challenges of climate change in all sectors and which contributes to improving the living conditions of populations and their resilience". Indeed, since 1994, the country has adhered to international protocols and action plans aimed at the operational implementation of the Convention. This adherence was manifested by the ratification of the United Nations Framework Convention on Climate Change (1994) and its protocols, in particular the Kyoto Protocol (2007) and the Paris Agreement (2016) [11]. This commitment resulted in the establishment in 2005 of a National Authority in charge of the Clean Development Mechanism (CDM-AN) resulting from the Kyoto Protocol. Then, in 2011, the State of Côte d'Ivoire joined the Mechanism for Reducing Greenhouse Gas Emissions from Deforestation and Forest Degradation (REDD+). This commitment was then consolidated in 2012, by the creation of a National Program to combat Climate Change (PNCC) followed by the accession in 2013 to the Coalition for Climate and Clean Air (CCAC) with a view to reducing short-lived climate pollutants (SLCP). In 2015, the country embarked on the process of the National Adaptation Plan (NAP). The day after the adoption of the Paris Agreement, the framework for climate action in Côte d'Ivoire is taking a decisive turn with the creation of a Central Directorate in charge of the Fight against Climate Change (DLCC) in 2016 in order to coordinate climate action [12]. This reaffirms the will of Côte d'Ivoire to raise climate change to the rank of national priority. Moreover, by elaborating the National Development Plan (PND) 2021-2025 which is the reference document for national development planning, the State has dedicated one of the six (06) priority axes, in particular axis 5, to the fight against climate change. This document of the revised NDCs is intended to be a tool to help identify and assess the needs and means of integrating climate change actions into sectoral plans and policies. Despite this manifest political will, much remains to be done both at the level of the mobilization of public and private actors and at the level of the operationalization of policies and strategies for mitigation and adaptation to climate change, including gender-related issues [13]. The National Adaptation Plan (NAP) is a process that helps countries identify and prioritize their climate change adaptation needs. It also helps countries develop and implement strategies to address these needs. Also, the guidance law on sustainable development N° 2014-390 of June 20, 2014 provides a legal basis for the NAP (National Adaptation Plan) which is part of a broader and integrated approach to environmental protection and sustainable development.

Thus, in 2015, the year of submission of the country's first NDCs, the NAP process began with consultations with a view to developing a roadmap with the support of the NAP global support program [14]. In March 2017, a project proposal to

strengthen the integration of climate change adaptation into development planning in Côte d'Ivoire was submitted to the Green Climate Fund via the "Readiness Adaptation" window, approved in February 2019. Thus, several activities were undertaken as a prelude to the elaboration of the NAP. These are specific studies on adaptation, the private sector, the roles and responsibilities of actors in the NAP development and implementation cycle, methodological guides and reports on climate risk assessment, quantification of impacts and costs of adaptation options. Synergies with other technical and financial partners are underway, with a view to developing structuring projects on adaptation, structuring the vertical approach to adaptation and on the sustainability of certain interventions. In addition, the feasibility of certain financial instruments, applied to adaptation, such as climate insurance are realized. Several consultations have been initiated on the Gender component and have resulted in the establishment of a gender and climate change platform and the development of an advocacy for the attention of the Ministry of the Environment and Sustainable Development and the Ministry in charge of Women, Family and Children. This advocacy led to the signing of a Memorandum of Understanding on gender and climate change in 2020 between the two ministries. Training workshops based on targeted programs have been deployed. The improvement of the institutional framework through a better knowledge of the constituents linked to the NAP process has been initiated. Analyses on the Measurement-Notification-Verification (MNV) device for adaptation have been initiated. The NAP is now available from 2022, in addition to the adaptation component of these NDCs.

3. Carbon Neutrality and Social Justice: A Synchronism Undermined by Climate Change and Justice

The challenges and opportunities in achieving climate justice challenge in Côte d'Ivoire, including the ECOWAS Regional Climate Strategy and its potential for political coalition-building on climate justice and adaptation financing.

3.1. Climate Change and Justice a Real Challenge to Carbon Neutrality in Côte d'Ivoire

The vulnerability of Côte d'Ivoire to climate change is due to its dependence on climate-sensitive sectors [15]. Ranked 144th out of 169 countries for its ND GAIN index, Côte d'Ivoire is among the most vulnerable countries to climate change due to its geographical location, its economic structuring and its low preparedness to face the adverse effects of climate change. Agriculture, representing $\frac{1}{4}$ of the country's GDP and more than half of all jobs, is one of the main sources of greenhouse gas emissions. It is also negatively impacted by rising temperatures and changing rainfall patterns with negative repercussions on agricultural productivity and more generally on food security. In addition, on an African scale, the area of arid and semi-arid lands could increase by 5 to 8% by 2080. The coastal plains, home to 30% of the Ivorian population and 80% of the country's economic activities, are already heavily affected by the adverse effects of climate change which accentuate

sea level rise and coastal erosion thus endangering human lives, especially for people living on the coast. At the national level, climate change threatens to push nearly a million additional Ivorians into extreme poverty, to increase the risk of water stress, with more and more regions expected to see more than 10% of their population in water scarcity, and to increase the upsurge of diseases associated with air and water among sensitive populations. Women are particularly vulnerable to the negative consequences of climate change due to the division of labour and gender roles, economic disparities and imbalances in hardship and time dedicated to domestic tasks that penalize their adaptation opportunities [16].

Côte d'Ivoire committed, through its first Nationally Determined Contributions (NDCs) as a prelude to the COP21 in Paris, to reduce its Greenhouse Gas (GHG) emissions by 28.25%, *i.e.* a reduction of approximately ten (10) million tonnes of CO₂ equivalent by 2030 compared to the Business as Usual or reference scenario. The 2021 NDC describes an unconditional 30.41% GHG reduction by 2030 relative to BaU. The evaluation of said NDCs revealed some shortcomings, in particular the failure to take forestry into account in the estimates and the lack of a performance monitoring and evaluation system with regard to the country's climate commitments. Thus, in accordance with the requirements of the Paris Agreement, the State of Côte d'Ivoire has carried out a revision of its NDCs by updating the GHG reduction efforts (mitigation) as well as the assessment of its vulnerability and adaptation options in the face of climate change. This revision process, started in February 2020, allowed a wide consultation of national strategic stakeholders, in particular key ministries, the private sector, civil society and territorial communities. At the end of these consultations, Côte d'Ivoire is raising its climate ambition to 30.41% corresponding to a reduction of thirty-seven (37) million tonnes CO₂ equivalent of Greenhouse Gas (GHG) emissions from all sectors, including Forestry and Other Land Uses (FAT), by 2030 compared to the new reference scenario [17]. This unconditional contribution consists of a reduction of 13.2 million tonnes of GHG emissions resulting from the implementation of measures in the energy, waste and agriculture sectors (corresponding to a 10.5% reduction in total national GHG emissions in 2030 compared to the reference scenario), and a reduction of 23.8 million tonnes of GHG emissions resulting from the implementation of measures in the Forestry sector and other Land Uses (corresponding to a 19.6% reduction in total national GHG emissions in 2030 compared to the reference scenario) [18]. Côte d'Ivoire could increase its ambition in terms of GHG emissions mitigation, provided that it receives additional international financial support. Thus, for the energy, waste and agriculture sectors, the ambition of GHG mitigation could go from an overall reduction in emissions of 13.2 to 17.2 million tonnes of CO₂ equivalent in 2030 compared to the reference scenario. In addition, the inclusion of additional measures in the Forestry sector and other Land Uses could bring the overall GHG mitigation ambition to a 98.95% reduction in total emissions in 2030 compared to the reference scenario, resolutely committing the country to carbon neutrality from 2030. The mitigation compo-

ment includes thirty-eight (38) measures, including twenty-seven (27) unconditional and eleven (11) conditional, the implementation of which is estimated at approximately USD ten (10) billion. With regard to the adaptation component, it aims to achieve a reduction in high vulnerability by 2030 and to increase the resilience of the identified sectors: water resources, agriculture, livestock and aquaculture, forestry, land use, health and coastal zones. The implementation of adaptation measures is estimated at approximately USD twelve (12) billion. Beyond the mitigation and adaptation components, the revision of the NDCs also took into account transversal aspects such as green jobs and just transition, gender, local authorities, and short-lived climate pollutants (SLCP), the reduction of which would also prevent more than 7,000 premature deaths per year by 2030.

Côte d'Ivoire's aspirations for economic growth and poverty alleviation are juxtaposed with the global imperative of carbon neutrality, necessitating a thorough analysis of justice considerations within its unique social, economic, and environmental landscape [19]. Côte d'Ivoire stands at a crossroads, striving to balance substantial carbon emissions arising from sectors like energy, agriculture, deforestation, with its commitment to social equity and environmental climate change and justice are real challenges to carbon neutrality in Côte d'Ivoire [20].

Côte d'Ivoire is a developing country with a rapidly growing population and economy [21]. This growth has led to increased greenhouse gas emissions, which are contributing to climate change. Climate change is already having a significant impact on Côte d'Ivoire, including more extreme weather events, rising sea levels, and changes in agricultural production. The poorest and most vulnerable communities in Côte d'Ivoire are disproportionately affected by climate change. These communities often live in areas that are more exposed to climate hazards, such as coastal areas and floodplains. Additionally, these communities often have fewer resources to adapt to the impacts of climate change. Climate justice is concerned with the fair distribution of the benefits and burdens of climate change. Côte d'Ivoire has a history of environmental injustice, with its forests being depleted by logging and industrial agriculture often at the expense of local communities [22]. This has contributed to climate change and made it more difficult for Côte d'Ivoire to achieve carbon neutrality. Achieving carbon neutrality in Côte d'Ivoire will require a concerted effort from the government, the private sector, and civil society. It is important to ensure that the transition to a low-carbon economy is fair and equitable, and that the poorest and most vulnerable communities are not disproportionately burdened by the costs of transition. Here are some specific challenges that Côte d'Ivoire faces in achieving carbon neutrality. In the field of high cost of renewable energy, we notice that renewable energy technologies are often more expensive than traditional fossil fuel technologies. This situation can make it difficult for Côte d'Ivoire to invest in renewable energy on a large scale [23].

Limited access to finance is another challenge for this country. In fact, Côte d'Ivoire is a developing country with limited access to finance. This makes it difficult to raise the capital needed to invest in renewable energy and other low-carbon tech-

nologies. It's good to notify the lack of capacity, which puts Côte d'Ivoire in lack the technical and institutional capacity to implement a low-carbon transition.

This could include a lack of trained personnel and a lack of supportive policies and regulations. The transition to a low-carbon economy could have social and economic impacts, such as job losses in the fossil fuel sector. It is important to address these impacts in a fair and equitable manner. Despite the challenges, Côte d'Ivoire [24] has a number of opportunities to achieve carbon neutrality. The country has abundant renewable energy resources, such as solar and hydroelectric power [25]. Additionally, the country's economy is growing rapidly, which presents opportunities for investment in low-carbon technologies. Here are some specific steps that Côte d'Ivoire can take to achieve carbon neutrality:

Côte d'Ivoire can invest in renewable energy projects, such as solar and hydroelectric power plants. This will help to reduce the country's reliance on fossil fuels and reduce greenhouse gas emissions. The country has to promote sustainable agriculture. Côte d'Ivoire can promote sustainable agricultural practices, such as agroforestry and water conservation. This will help to reduce greenhouse gas emissions from the agricultural sector and build resilience to climate change.

Furthermore, it's important to protect and restore forests in Côte d'Ivoire. This restoration can play an important role in absorbing carbon dioxide from the atmosphere. Côte d'Ivoire can develop and implement a national climate change adaptation plan to help the country cope with the impacts of climate change. In this perspective, Côte d'Ivoire has to ensure that the benefits of carbon neutrality are shared equitably. This means that the benefits of carbon neutrality have to be shared equitably by designing policies and programs that specifically benefit the poorest and most vulnerable communities in this country. Achieving carbon neutrality in Côte d'Ivoire will require a concerted effort from all stakeholders. However, by taking the necessary steps, Côte d'Ivoire can achieve a low-carbon future that is fair and equitable for all Ivoirians. The challenges of climate change and justice make it difficult for Côte d'Ivoire to achieve carbon neutrality.

The country needs to invest in renewable energy, sustainable agriculture, and forest protection. However, these investments can be expensive and difficult to finance. Additionally, Côte d'Ivoire needs to ensure that the benefits of carbon neutrality are shared equitably, and that the poorest and most vulnerable communities are not disproportionately burdened by the costs of transition. Climate change and justice are real challenges to carbon neutrality in Côte d'Ivoire. However, the country has a number of opportunities to achieve a low-carbon future that is fair and equitable for all Ivoirians. By taking the necessary steps, Côte d'Ivoire can set an example for other developing countries on how to transition to a sustainable economy.

3.2. ECOWAS Regional Climate Strategy: An Opportunity in Achieving Climate Justice Challenge and Carbon Neutrality in Côte d'Ivoire

The ECOWAS Regional Climate Strategy is a framework for addressing the cli-

mate crisis in West Africa. It aims to reduce greenhouse gas emissions, build resilience to climate change impacts, and promote sustainable development. The ERCS identifies several key areas where action is needed. In fact, in the field of energy, the ERCS calls for a transition to renewable energy sources, such as solar and wind power. This would help to reduce greenhouse gas emissions and improve energy security [26]. Concerning the agriculture field, the ERCS calls for sustainable agricultural practices that reduce emissions and build resilience to climate change impacts. This could include measures such as agroforestry, water conservation, and sustainable grazing practices. In addition, the forestry field, the ERCS calls for the protection and restoration of forests, which play an important role in absorbing carbon dioxide from the atmosphere [27]. Finally, in the Coastal areas, the ERCS calls for adaptation measures to protect coastal communities from the impacts of sea level rise and storm surges.

Côte d'Ivoire has here a real opportunity to make significant progress on climate justice and carbon neutrality by contributing to the implementation of the ERCS [28] in his national norms. The country has abundant renewable energy resources, such as solar and hydropower. It also has a large agricultural sector that could be made more sustainable. Côte d'Ivoire's forests are also important for carbon sequestration and biodiversity conservation [29].

The specific ways that Côte d'Ivoire can contribute to the implementation of the ERCS by investing in renewable energy: Côte d'Ivoire has the potential to become a leader in renewable energy production. The government can support the development of renewable energy projects by providing tax breaks and other incentives to investors, promote sustainable agriculture: The government can promote sustainable agricultural practices by providing training to farmers and providing subsidies for sustainable inputs, such as organic fertilizers [30].

The government can protect and restore forests by establishing protected areas and by working with communities to develop sustainable forest management practice. In addition, the government can help communities to adapt to climate change by investing in infrastructure such as seawalls and drainage systems, also provide training to communities on how to cope with extreme weather events such as droughts and floods. By taking these steps, Côte d'Ivoire can make a significant contribution to the implementation of the ERCS and help to achieve climate justice and carbon neutrality in West Africa [31]. In addition to the above, Côte d'Ivoire can also play a leadership role in promoting climate justice and carbon neutrality in West Africa by sharing its experiences and best practices with other countries in the region. Côte d'Ivoire [32] has already made significant progress on climate action, and its experiences can be valuable to other countries in the region.

The government can protect and restore forests by establishing protected areas and by working with communities to develop sustainable forest management practice [33]. In addition, the government can help communities to adapt to climate change by investing in infrastructure such as seawalls and drainage systems,

also provide training to communities on how to cope with extreme weather events such as droughts and floods. By taking these steps, Côte d'Ivoire can make a significant contribution to the implementation of the ERCS and help to achieve climate justice and carbon neutrality in West Africa [34]. In addition to the above, Côte d'Ivoire can also play a leadership role in promoting climate justice and carbon neutrality in West Africa by sharing its experiences and best practices with other countries in the region. Côte d'Ivoire has already made significant progress on climate action, and its experiences can be valuable to other countries in the region [35].

In the field of Energy, Côte d'Ivoire can develop a national renewable energy plan that sets ambitious targets for the development of solar, wind, and hydro-power [36]. It can also support the development of mini-grids in rural areas. Mini-grids can provide reliable and affordable electricity to rural communities that are not connected to the national grid, Invest in energy efficiency measures. Here, Côte d'Ivoire can invest in energy efficiency measures, such as improving insulation in buildings and using more efficient appliances [37]. In Agriculture sector the country can promote agroforestry. In fact, agroforestry is a land management practice that combines trees and shrubs with crops and it can help to reduce greenhouse gas emissions, improve soil fertility, and increase crop yields [38]. Côte d'Ivoire can support the development of sustainable irrigation practices. This can help farmers to reduce their water consumption and improve their yields. Côte d'Ivoire can invest in research and development of climate-smart agricultural practices that can help farmers to adapt to climate change [39]. In the forestry sector, Côte d'Ivoire can strengthen its forest protection laws and enforcement to deter illegal logging and deforestation. In this country, community-based forest management can help to ensure that forests are managed sustainably for the benefit of local communities. And Côte d'Ivoire can invest in forest restoration to help to restore degraded forests and sequester carbon dioxide from the atmosphere [40].

The ECOWAS Regional Climate Strategy presents a significant opportunity for Côte d'Ivoire and the region as a whole to address the challenges of climate change and work towards carbon neutrality [41]. This strategy provides a framework for coordinated efforts among ECOWAS member states to mitigate climate change, protect vulnerable populations, and foster sustainable development. By leveraging the resources and expertise of multiple stakeholders, this strategy can help to reduce greenhouse gas emissions, increase renewable energy, and promote adaptation measures that address the specific needs of the communities in Côte d'Ivoire. In this way, the ECOWAS Regional Climate Strategy can help to promote climate justice and ensure a more sustainable and equitable future for Ivoirians [42].

These legal international documents can be translating into action for balancing carbon neutrality and social justice in Côte d'Ivoire. This process can include implementation of renewable energy projects that contribute to reducing greenhouse gas emissions while providing access to affordable and clean energy, benefiting

both the environment and marginalized communities. Côte d'Ivoire have to seriously promote gender equality and women's empowerment in climate mitigation and adaptation strategies, ensuring that women have equal access to resources and decision-making processes [43]. Implementation of community-based initiatives that address both climate change and social issues, such as reforestation programs that create employment opportunities for local communities while contributing to carbon sequestration [44]. It is important to note that while these legal documents provide a framework, their implementation and effectiveness depend on various factors, including political will, financial resources, and capacity-building efforts [45].

4. Conclusions

While Côte d'Ivoire and other West African countries are taking steps to address climate change, there are challenges and opportunities that need to be considered [46]. The ECOWAS Regional Climate Strategy, for example, has been praised for creating a platform for political coalition-building on climate justice and adaptation financing. However, it has also been criticized for not positioning West Africa as a hub for advancing research, science, and technological innovation to tackle climate change [41]. To achieve a just energy transition in Africa, it is important to consider the principle of common but differentiated responsibilities, which takes into account past emissions and how they shape future emission trajectories. Africa, with its low historical and current carbon emission share, should not be denied the "carbon space" to develop its economies [16].

True climate justice suggests that Africa is owed almost ten times as much as the global climate finance it has received in recent years. Related Summary of latest IPCC report Climate resilient development Africa fact sheet in its updated NDC, Côte d'Ivoire commits to reducing its greenhouse gas emissions by 30.41% by 2030 relative to business as usual, or 98.95% with international support [47]. With additional mitigation measures in the Food and Land Use sector and the inclusion of new greenhouse gases, Côte d'Ivoire significantly raises its climate ambition, resolutely committing to carbon neutrality from 2030 [48]. In terms of adaptation, the country aims to reduce vulnerabilities and increase climate resilience across five priority sectors: agriculture, food and land use, water, health, and coastal zones. Also, the updated NDC considers cross-cutting aspects including green jobs and just transition, gender, local authorities, and short-lived climate pollutants and will be implemented based on an investment plan to increase climate finance flows [29]. Partnerships, Monitoring and Evaluation Plans, as well as a communication strategy, will also be used to further develop an enabling environment for climate actions.

Conflicts of Interest

The author declares no conflicts of interest.

References

- [1] Danish, Ulucak, R. and Khan, S.U. (2020) Determinants of the Ecological Footprint: Role of Renewable Energy, Natural Resources, and Urbanization. *Sustainable Cities and Society*, **54**, Article 101996. <https://doi.org/10.1016/j.scs.2019.101996>
- [2] Hill, A.C. (2021) *The Fight for Climate after COVID-19*. Oxford University Press, 244.
- [3] Singh, H., Najafi, M.R. and Cannon, A.J. (2021) Characterizing Non-Stationary Compound Extreme Events in a Changing Climate Based on Large-Ensemble Climate Simulations. *Climate Dynamics*, **56**, 1389-1405.
- [4] Wang, J., Chen, Y., Liao, W., He, G., Tett, S.F.B., Yan, Z., *et al.* (2021) Anthropogenic Emissions and Urbanization Increase Risk of Compound Hot Extremes in Cities. *Nature Climate Change*, **11**, 1084-1089. <https://doi.org/10.1038/s41558-021-01196-2>
- [5] Li, S. and Shao, Q. (2022) Greening the Finance for Climate Mitigation: An ARDL-ECM Approach. *Renewable Energy*, **199**, 1469-1481. <https://doi.org/10.1016/j.renene.2022.09.071>
- [6] Ali, K., Jianguo, D. and Kirikkaleli, D. (2022) Modeling the Natural Resources and Financial Inclusion on Ecological Footprint: The Role of Economic Governance Institutions. Evidence from ECOWAS Economies. *Resources Policy*, **79**, Article 103115. <https://doi.org/10.1016/j.resourpol.2022.103115>
- [7] (2013) ECOWAS Renewable Energy Policy [Internet]. <https://ppp.worldbank.org/public-private-partnership/library/ecowas-renewable-energy-policy>
- [8] Wang, S., Wang, X. and Chen, S. (2022) Global Value Chains and Carbon Emission Reduction in Developing Countries: Does Industrial Upgrading Matter? *Environmental Impact Assessment Review*, **97**, Article 106895. <https://doi.org/10.1016/j.eiar.2022.106895>
- [9] Abubakar, Y.I., Mustapha, R.A. and Ajiboye, E.S. (2020) Impact of Governance on Financial Development: Evidence from West Africa. *Hasanuddin Economics and Business Review*, **3**, Article 103. <https://doi.org/10.26487/hebr.v3i3.2055>
- [10] Jun, W., Zakaria, M., Shahzad, S.J.H. and Mahmood, H. (2018) Effect of FDI on Pollution in China: New Insights Based on Wavelet Approach. *Sustainability*, **10**, Article 3859. <https://doi.org/10.3390/su10113859>
- [11] Wang, S., Wang, J., Li, S., Fang, C. and Feng, K. (2019) Socioeconomic Driving Forces and Scenario Simulation of CO₂ Emissions for a Fast-Developing Region in China. *Journal of Cleaner Production*, **216**, 217-229. <https://doi.org/10.1016/j.jclepro.2019.01.143>
- [12] Kayani, G.M., Ashfaq, S. and Siddique, A. (2020) Assessment of Financial Development on Environmental Effect: Implications for Sustainable Development. *Journal of Cleaner Production*, **261**, Article 120984. <https://doi.org/10.1016/j.jclepro.2020.120984>
- [13] Salahuddin, M., Gow, J. and Ozturk, I. (2015) Is the Long-Run Relationship between Economic Growth, Electricity Consumption, Carbon Dioxide Emissions and Financial Development in Gulf Cooperation Council Countries Robust? *Renewable and Sustainable Energy Reviews*, **51**, 317-326. <https://doi.org/10.1016/j.rser.2015.06.005>
- [14] Ito, K. (2017) CO₂ Emissions, Renewable and Non-Renewable Energy Consumption, and Economic Growth: Evidence from Panel Data for Developing Countries. *International Economics*, **151**, 1-6. <https://doi.org/10.1016/j.inteco.2017.02.001>

- [15] Boutabba, M.A. (2014) The Impact of Financial Development, Income, Energy and Trade on Carbon Emissions: Evidence from the Indian Economy. *Economic Modelling*, **40**, 33-41. <https://doi.org/10.1016/j.econmod.2014.03.005>
- [16] Jiang, C. and Ma, X. (2019) The Impact of Financial Development on Carbon Emissions: A Global Perspective. *Sustainability*, **11**, Article 5241. <https://doi.org/10.3390/su11195241>
- [17] Kim, R. (2010) The Principle of Sustainability: Transforming Law and Governance by Klaus Bosselmann. *Journal of Education for Sustainable Development*, **2**, 309-312.
- [18] Samimi, A.J., Ahmadpour, M. and Ghaderi, S. (2012) Governance and Environmental Degradation in MENA Region. *Procedia-Social and Behavioral Sciences*, **62**, 503-507. <https://doi.org/10.1016/j.sbspro.2012.09.082>
- [19] Hope, K.R. (2009) Capacity Development for Good Governance in Developing Countries: Some Lessons from the Field. *International Journal of Public Administration*, **32**, 728-740. <https://doi.org/10.1080/01900690902908562>
- [20] Omri, A. and Ben Mabrouk, N. (2020) Good Governance for Sustainable Development Goals: Getting Ahead of the Pack or Falling Behind? *Environmental Impact Assessment Review*, **83**, Article 106388. <https://doi.org/10.1016/j.eiar.2020.106388>
- [21] Akram, R., Fareed, Z., Xiaoli, G., Zulfiqar, B. and Shahzad, F. (2022) Investigating the Existence of Asymmetric Environmental Kuznets Curve and Pollution Haven Hypothesis in China: Fresh Evidence from QARDL and Quantile Granger Causality. *Environmental Science and Pollution Research*, **29**, 50454-50470. <https://doi.org/10.1007/s11356-022-18785-z>
- [22] Bouzahzah, M. (2022) Pollution Haven Hypothesis in Africa: Does the Quality of Institutions Matter? *International Journal of Energy Economics and Policy*, **12**, 101-109. <https://doi.org/10.32479/ijeep.11856>
- [23] Huang, S., Sadiq, M. and Chien, F. (2021) The Impact of Natural Resource Rent, Financial Development, and Urbanization on Carbon Emission. *Environmental Science and Pollution Research*, **30**, 42753-42765. <https://doi.org/10.1007/s11356-021-16818-7>
- [24] Lei, W., Liu, L., Hafeez, M. and Sohail, S. (2021) Do Economic Policy Uncertainty and Financial Development Influence the Renewable Energy Consumption Levels in China? *Environmental Science and Pollution Research*, **29**, 7907-7916. <https://doi.org/10.1007/s11356-021-16194-2>
- [25] Haouas, I., Khraief, N., Cooray, A. and Onifade, S.T. (2022) Exploring the Time-Varying Causal Nexuses between Remittances and Financial Development in MENA Region. *Journal of Sustainable Finance & Investment*, **14**, 1-27. <https://doi.org/10.1080/20430795.2022.2112139>
- [26] Nguyen, T.T.T., Pham, B.T. and Sala, H. (2022) Being an Emerging Economy: To What Extent Do Geopolitical Risks Hamper Technology and FDI Inflows? *Economic Analysis and Policy*, **74**, 728-746. <https://doi.org/10.1016/j.eap.2022.04.005>
- [27] Ren, S., Hao, Y. and Wu, H. (2022) The Role of Outward Foreign Direct Investment (OFDI) on Green Total Factor Energy Efficiency: Does Institutional Quality Matters? Evidence from China. *Resources Policy*, **76**, Article 102587. <https://doi.org/10.1016/j.resourpol.2022.102587>
- [28] Usman, M. and Balsalobre-Lorente, D. (2022) Environmental Concern in the Era of Industrialization: Can Financial Development, Renewable Energy and Natural Resources Alleviate Some Load? *Energy Policy*, **162**, Article 112780. <https://doi.org/10.1016/j.enpol.2022.112780>

- [29] Iorember, P.T., Goshit, G.G. and Dabwor, D.T. (2020) Testing the Nexus between Renewable Energy Consumption and Environmental Quality in Nigeria: The Role of Broad-Based Financial Development. *African Development Review*, **32**, 163-175. <https://doi.org/10.1111/1467-8268.12425>
- [30] Patterson, J., Schulz, K., Vervoort, J., van der Hel, S., Widerberg, O., Adler, C., *et al.* (2017) Exploring the Governance and Politics of Transformations Towards Sustainability. *Environmental Innovation and Societal Transitions*, **24**, 1-16. <https://doi.org/10.1016/j.eist.2016.09.001>
- [31] Wudil, A.H., Usman, M., Rosak-Szyrocka, J., Pilař, L. and Boye, M. (2022) Reversing Years for Global Food Security: A Review of the Food Security Situation in Sub-Saharan Africa (SSA). *International Journal of Environmental Research and Public Health*, **19**, Article 14836. <https://doi.org/10.3390/ijerph192214836>
- [32] Dogan, E. and Seker, F. (2016) The Influence of Real Output, Renewable and Non-Renewable Energy, Trade and Financial Development on Carbon Emissions in the Top Renewable Energy Countries. *Renewable and Sustainable Energy Reviews*, **60**, 1074-1085. <https://doi.org/10.1016/j.rser.2016.02.006>
- [33] Al Mamun, M., Boubaker, S. and Nguyen, D.K. (2022) Green Finance and Decarbonization: Evidence from around the World. *Finance Research Letters*, **46**, Article 102807. <https://doi.org/10.1016/j.frl.2022.102807>
- [34] Shahbaz, M., Nasir, M.A. and Roubaud, D. (2018) Environmental Degradation in France: The Effects of FDI, Financial Development, and Energy Innovations. *Energy Economics*, **74**, 843-857. <https://doi.org/10.1016/j.eneco.2018.07.020>
- [35] Kiviyiro, P. and Arminen, H. (2014) Carbon Dioxide Emissions, Energy Consumption, Economic Growth, and Foreign Direct Investment: Causality Analysis for Sub-Saharan Africa. *Energy*, **74**, 595-606. <https://doi.org/10.1016/j.energy.2014.07.025>
- [36] Shobande, O.A. and Ogbefun, L. (2022) The Criticality of Financial Development and Energy Consumption for Environmental Sustainability in OECD Countries: Evidence from Dynamic Panel Analysis. *International Journal of Sustainable Development & World Ecology*, **29**, 153-163. <https://doi.org/10.1080/13504509.2021.1934179>
- [37] Ofori, E.K., Onifade, S.T., Ali, E.B., Alola, A.A. and Zhang, J. (2023) Achieving Carbon Neutrality in Post COP26 in BRICS, MINT, and G7 Economies: The Role of Financial Development and Governance Indicators. *Journal of Cleaner Production*, **387**, Article 135853. <https://doi.org/10.1016/j.jclepro.2023.135853>
- [38] Yakubu, Z., Loganathan, N., Sethi, N. and Golam Hassan, A.A. (2020) Do Financial Development, Trade Openness and Political Stability Complement for Egypt's Economic Growth? *Journal of International Commerce, Economics and Policy*, **12**, Article 2150001. <https://doi.org/10.1142/s1793993321500010>
- [39] Krifa-Schneider, H., Matei, I. and Matei, I. (2010) Business Climate, Political Risk and FDI in Developing Countries: Evidence from Panel Data. *International Journal of Economics and Finance*, **2**, 54-65. <https://doi.org/10.5539/ijef.v2n5p54>
- [40] Qureshi, F., Qureshi, S., Vinh Vo, X. and Junejo, I. (2021) Revisiting the Nexus among Foreign Direct Investment, Corruption and Growth in Developing and Developed Markets. *Borsa Istanbul Review*, **21**, 80-91. <https://doi.org/10.1016/j.bir.2020.08.001>
- [41] Appiah, M., Onifade, S.T. and Gyamfi, B.A. (2022) Building Critical Infrastructures: Evaluating the Roles of Governance and Institutions in Infrastructural Developments in Sub-Sahara African Countries. *Evaluation Review*, **46**, 391-415. <https://doi.org/10.1177/0193841x221100370>
- [42] Omri, A., Kahia, M. and Kahouli, B. (2021) Does Good Governance Moderate the

-
- Financial Development-CO₂ Emissions Relationship? *Environmental Science and Pollution Research*, **28**, 47503-47516. <https://doi.org/10.1007/s11356-021-14014-1>
- [43] Gossel, S.J. (2018) FDI, Democracy and Corruption in Sub-Saharan Africa. *Journal of Policy Modeling*, **40**, 647-662. <https://doi.org/10.1016/j.jpolmod.2018.04.001>
- [44] Asongu, S.A. and Odhiambo, N.M. (2020) Enhancing Governance for Environmental Sustainability in Sub-Saharan Africa. *Energy Exploration & Exploitation*, **39**, 444-463. <https://doi.org/10.1177/0144598719900657>
- [45] Zhang, H. and Kim, H. (2022) Institutional Quality and FDI Location: A Threshold Model. *Economic Modelling*, **114**, Article 105942. <https://doi.org/10.1016/j.econmod.2022.105942>
- [46] Gyimah, J., Nwigwe, U.A., Opoku, E.O. and Yao, X. (2023) Promoting Environmental Sustainability in Africa: The Position of Globalization, Renewable Energy, and Economic Growth. *SN Business & Economics*, **3**, Article No. 154. <https://doi.org/10.1007/s43546-023-00538-w>
- [47] IEA Africa Energy Outlook (2022) <https://www.iea.org/reports/africa-energy-outlook-2022>
- [48] Global Green Growth Institute Country Planning Framework (2022) <https://gggi.org/wp-content/uploads/2022/02/GGGI-Cote-d'Ivoire-CPF-02.11.22.pdf>