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Climate Change Impacts on the Rights of People of African Descent

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Executive Summary

This report will serve as an evidence base for the OHCHR Working Group of Experts on People of African Descent (WGEPAD) to examine the impacts of climate change and climate policies on the effective enjoyment of the human rights of PAD. The WGEPAD undertakes fact-finding and monitors the situation of PAD around the world. To date, they have not investigated the impact of climate change or climate policies on PAD. This report aims to provide the Working Group with background information regarding the specific negative climate impacts affecting the human rights of PAD, who have been historically discriminated against in a number of spheres and in countries around the world.

The report's authors conducted an in-depth literature review on the regional impacts of climate change and climate policies on PAD using a racial discrimination and human rights framework, against the backdrop of environmental justice. The literature review revealed that research on this topic has been more extensively conducted in the Americas than in Europe or in Asia. Four case studies were developed from this literature review and interviews with experts to illustrate various situations. The selection of case studies was based on the availability of data, international relevance, and ensuring a diversity of contexts, racial discriminations, and rights affected. The chosen case studies were: Hurricane Katrina in Louisiana (United States), floods in Esmeraldas (Ecuador), the cap-and-trade system in California (United States), and biofuel policies in Colombia.

The research unveiled the impacts related to the following human rights in various regional contexts. It is likely that these rights might also be affected for PAD living in analogous situations and experiencing similar climate impacts in other parts of the world as well. These rights are interconnected, which means that a holistic approach should be taken to understand how they interact with each other.

The right to life and the right to health of PAD in North America are threatened by health consequences from heat waves, air pollution, extreme weather events and a lack of access to medical care. In South America, floods appear to be particularly threatening to the health and lives of PAD. The links between climate change and human health seem central as the four case studies highlighted violations of the right to health of PAD.

The right to adequate housing is violated in both Latin and North America, where PAD have poor quality housing in disadvantaged areas vulnerable to climate events. Hurricane Katrina, the floods in Esmeraldas, and air pollution in California highlight this historical discrimination and its consequences on the habitability of housing. The lack of access to housing insurance, especially in North America, affects the security of tenure of PAD.

The right to adequate food of PAD can be threatened due to rising prices of food following climate events or delayed reconstruction of grocery stores/markets after a disaster. Economic and physical access to food in rural communities can also be threatened by the depletion of agricultural yield and fisheries due to climate change.

The right to education of PAD in North America is threatened by displacement of school-age children in the aftermath of disaster. The deliberate delay of reconstruction of schools by the city government in affected areas also violates PAD children's right to have free, compulsory, and universal education.

The right to work for PAD in North America is threatened by displacement in the aftermath of disasters due to their high level of intransience. This contributes to the difficulty of upscaling their skills to re-enter the workforce. The State's responsibility to ensure the enjoyment of this right through policies, programs or guidance is not respected.

The right to participate in public affairs is not fully respected as PAD have had limited decision-making influence on climate policies. The four case studies illustrate that a lack of participation of PAD can lead to mis-adapted climate policies and the perpetuation of rights violations and racial discrimination. Nevertheless, the California case study is an example that the respect of this right can have positive outcomes on environmental justice communities.

PAD also suffer from a lack of visibility, especially in Europe and Asia, where the impacts of climate change and climate policies on their rights is almost not studied. In most of the regions, except for the United States, PAD also suffers from a generalized lack of recognition of their vulnerable pre-conditions due to historical discrimination.

Through the case studies, a regional division appeared between North and South America, where the cases were respectively taking place in urban and rural settings. However, the division does not represent where PAD live since they are present in most geographic contexts in both regions. The case studies have demonstrated that historical and structural racial discrimination exacerbate the disproportionate impacts of climate change and climate policies on the rights of PAD.

These discriminations can occur under different forms. In the cases of Hurricane Katrina and the California cap-and-trade system, historical discrimination led to poorer housing conditions, which render PAD more affected by flooding and air pollution. In Ecuador, historical discrimination created an economic disempowerment led to further vulnerability in front of floods. In Columbia, structural discrimination has framed the struggles around lands and biofuel development. In most of these examples, extractive and polluting industries are responsible for aggravating climate change consequences on PAD. Governments can also be held accountable for their lack of action to address the accumulation of discriminations towards PAD.

Recommendations

Decision-makers should examine the interaction between historical and structural discrimination on PAD and climate change to inform their policymaking. In particular in the following areas: unintended impacts of emergency response plans; greater recognition of the existing vulnerability of PAD when designing adaptation measures; interaction between climate mitigation policies and existing air pollution distribution; risk of climate mitigation policies incentivising land grabbing.

Special measures should be considered as part of a state's climate change response as these can enhance the effectiveness of emergency response and adaptation measures by reducing the vulnerability of PAD and the social impacts of climate mitigation measures. Based on our research, focus areas for special measures are: Access to health and housing given that climate change presents a significant threat to both and they are a major source of accumulation of disadvantage; Access to land, particularly to reduce the impact of mitigation policies which can incentivise land grabbing; Access to education to ensure PAD have greater access to economic opportunities, political participation and access to justice. These are fundamental to reduce the vulnerability and impacts of climate change effects and policies.

Priority should be given to increase the participation of PAD in the design and implementation of climate change emergence response, adaptation and mitigation measures. Opportunities should be taken to address both climate change and racial discrimination together, rather than treated separately.

From our research, we identified areas which would benefit from further research:

- The impacts of climate change on PAD in Europe and Asia;
- The inclusion of PAD in national climate change strategies and risk assessments;
- The intersectionality of race and other factors that may enhance vulnerabilities to climate change;
- Climate adaptation and mitigation policies, especially market mechanisms, to understand their impact on PAD;
- Disproportionate risk of forced migration for PAD due to climate change and additional support measures that may be required to mitigate the negative impacts of displacement.

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List of Acronyms

| | |
|--------|--------------------------------------------------------------------------------------|
| CARB | California Air Resources Board |
| CERD | Committee on Elimination of Racial Discrimination |
| FAO | Food and Agriculture Organization |
| FEMA | Federal Emergency Management Agency (United States) |
| GHG | Greenhouse Gases |
| HRC | Human Rights Council |
| IACHR | Inter-American Commission on Human Rights |
| ICCPR | International Covenant on Civil and Political Rights |
| ICERD | International Convention on the Elimination of All Forms of Racial Discrimination |
| ICESCR | International Covenant on Economic, Social and Cultural Rights |
| IDPAD | International Decade of People of African Descent |
| IHEID | Institut des Hautes Etudes Internationales et du Développement |
| LAC | Latin America and the Caribbean |
| LEPC | Local Emergency Planning Committee (United States) |
| NCDP | National Center for Disaster Preparedness (United States) |
| OHCHR | Office of the High Commissioner for Human Rights |
| PAD | People of African Descent |
| RED | Renewable Energy Directive |
| SDGs | Sustainable Development Goals |
| UDHR | Universal Declaration of Human Rights |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNFCCC | United Nations Framework Convention on Climate Change |
| WGEPAD | Working Group of Experts on People of African Descent |

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1. Introduction

In the past ten years, the relationship between climate change and human rights has received increasing attention from the international community. The increasing frequency of extreme weather events and natural disasters, rising sea-levels, floods, heat waves, droughts, desertification, water shortages, and the spread of tropical and vector-borne diseases have been identified as some of the adverse impacts of climate change. These phenomena directly and indirectly threaten the full and effective enjoyment of a range of human rights by people throughout the world, including the rights to life, water and sanitation, food, health, housing, self-determination, culture and development.

The Human Rights Council (HRC), its Special Procedures mechanisms and the Office of the High Commissioner for Human Rights (OHCHR) have contributed to documenting the links between climate change and human rights and have sought to bring renewed attention to these challenges through a series of resolutions, reports and activities, and by advocating for a human-rights based approach to climate change and climate action. OHCHR has a mandate to ensure that "international and national environmental and climate policies and plans increasingly are implemented in accordance with international human rights standards" (OHCHR, n.d.).

Within this work, the intersection between climate change and specific rights, issues or vulnerable groups has been investigated further including the right to health, migration, rights of the child, rights of persons with disabilities, rights of older persons and gender-differentiated impacts (OHCHR, n.d.). These reports have argued that the negative impacts of climate change disproportionately affect persons and communities that are already in disadvantageous situations owing to geography, poverty, gender, age, disability, cultural or ethnic background, among others. However, there is a lack of knowledge and understanding of the ways in which these negative impacts specifically affect certain groups that have been historically discriminated against, in particular PAD.

Since the 2001 World Conference against Racism in Durban, South Africa, the promotion and protection of human rights of PAD has been a priority concern for the United Nations. In 2013, the General Assembly proclaimed an International Decade for People of African Descent (IDPAD) to be observed from 2015 to 2024 (UNGA Resolution A/RES/68/237). The IDPAD, together with the Sustainable Development Goals (SDGs) framework, is a historic opportunity to bring about real change for PAD in their enjoyment of economic, social, cultural, civil and political rights and the right to development. In 2005, the Working Group of Experts on People of African Descent was established to undertake fact-finding and monitoring of the situation of PAD around the world. To date, they have not investigated the impact of climate change or climate policies on PAD.

Within this context, the aim of this study was to examine to what degree the effective enjoyment of the human rights of PAD are negatively and disproportionately impacted by climate change. It will also explore the impacts of policies and actions to mitigate and adapt to climate change on the human rights of persons of African descent. This report will serve as an

evidence base for the OHCHR WGEPAD, which is expected to devote a session to this topic in 2021.

The remaining report is structured as follows:

1. A theoretical framework sets out key concepts that were used to analyse and frame the research findings. These findings respond to specific research questions described in this section.
2. The methodology applied to respond to the research questions is described.
3. The literature review containing empirical evidence per region is presented.
4. The case studies are then presented individually and compared.
5. Insights from the literature review and case studies are presented together in the conclusions section
6. Finally, key recommendations are set out.

2. Theoretical Framework

The theoretical framework sets out key concepts that were used to analyse and frame the research findings. This section culminates in presenting the research questions for the study and explaining how the concepts described provide an analytical framework to respond to these.

2.1 People of African Descent

Before presenting analytical concepts, it is important to set out who People of African descent (PAD) designates and elaborate on their geographic distribution and socio-economic situation.

PAD are people of African origin living in the diaspora, be they descendants of the victims of the transatlantic slave trade or more recent migrants (OHCHR, 2015). This is based on the Durban Declaration (2001), which distinguishes between Africans and PAD as two separate groups. The definition also includes the notion of self-identification - a person is of African descent who identifies as such (OHCHR, 2015). Using this definition, it is considered that there are more than 215 million people identifying themselves as being of African descent in the world, with approximately 150 million living in Latin America and the Caribbean, 40 million in North America and 15 million in Europe.

Based on this definition, our research will not examine the impacts of climate change on the rights of people currently living in Africa. Additionally, while recognizing that people from the Maghreb and northern African region are also part of the African continent, as a result of the literature and case studies identified, our study has tended to focus on the experience of people of sub-Saharan African origin.

Every country has its own understanding of PAD based primarily on census categorisation of and prevailing socio-cultural understandings of PAD. For the objective of this research, we have adopted the terms and delimitations of PAD of the country. It was found that certain regional patterns emerge and hence the description of PAD and the literature review was organised according to key regions namely North America, Latin America and the Caribbean

(LAC), Europe and Asia. It should also be noted that PAD are often integrated under the broader umbrella of “people of color” or, in the case of LAC, certain rural PAD communities are agglomerated with indigenous people.

The following sections briefly describe the geographic distribution of PAD per region, the predominant cause of migration, their socio-economic situation and evidence of racial discrimination.

North America: In this section, we consider Canada and the United States the two countries forming the North American region. Although Mexico is part of North America, we have treated it in the region of Latin America and the Caribbean in line with the approach taken by OHCHR when assessing the experience of PAD according to regions.

In North America, PAD are mainly concentrated in the United States, where they form a significant proportion of the population. Indeed, more than 40 million citizens in the country self-identified as Black or African American. In 2018, Black individuals represented 13.4% of the total US population (Ferro, 2020). Most of these individuals are descendants of African slaves who were forcibly transported to the Americas to work on plantations and in mines. Despite the fact that slavery was abolished more than a century ago, socio-economic inequalities remain. On-going racial discrimination towards afro-descendants in the US derives from historical inequalities that are still ingrained in American society, affecting social relations and attitudes between ethnic groups. Black women particularly experience discrimination based on gender and ethnicity, whereby they suffer from a poorer economic situation and more violations of their human rights. More than 25% of Black Americans live below the poverty level. In contrast, less than 10% of the white population is living in such conditions (Ferro, 2020).

In Canada, PAD are denominated as “Black people” by the federal government. The Black population in the country has more than 200 ethnic or cultural origins, mainly from the Caribbean and Africa. African descent communities in Canada account for 3.5% of the country’s total population, which represented 1,198,540 persons in 2016. The population of PAD has nearly doubled in 20 years. According to Statistics Canada, the Black population will continue to increase in the following years and could represent more than 5% of the Canadian population in 2036. Immigration and a significant natality rate are the main factors of the African descent population growth (Government of Canada, 2019).

Similar to the United States, Black communities in Canada suffer from a less advantageous socio-economic situation compared to the white population. For instance, Black youth have lower levels of educational attainment than other boys of the same age. Moreover, the labor market participation of Black communities has stagnated in recent years, whereas it has improved for the rest of the population. The gap in employment rate and annual wages between Black people and other members of the population have thus increased in recent years (Government of Canada, 2020).

Latin America and the Caribbean: According to the World Bank, there are 150 million PAD living in LAC (Freire et al., 2018). The majority of these are found in Brazil, with an estimate of over 105 million living there in 2015 (Freire et al., 2018).

PAD are concentrated in certain localities of Latin America and the Caribbean. Notable examples in Latin America include northern Brazil, the Pacific coast of Colombia, the province

of Esmeraldas in Ecuador, the region of Barlovento in Venezuela, and the Atlantic coasts of Costa Rica, Honduras, Nicaragua, and Panama. Within Latin America, 91 percent are located in Brazil and Venezuela, and a further 7 percent in Colombia, Cuba, Ecuador, and Mexico (Freire et al., 2018).

Currently, the majority of PAD in this region (up to 82 percent) live in urban centres (Freire et al., 2018). For those living in rural areas, Afro-descendant communities have similarities to indigenous communities given a common experience of livelihoods and cultural practices that are tied to their environment and natural resources.

PAD in LAC share a common ancestry of slavery, displacement and exclusion. This past continues to affect the lives of afro-descendants today, as demonstrated by their disproportionate representation among the poor. A study considering six countries in Latin America showed that Afro-descendants account for half of the population living in extreme poverty, despite representing only 38 percent of the population (Freire et al., 2018). Across the Latin American region, PAD are over 2.5 times more likely to live in chronic poverty than whites or persons of mixed race (Freire et al., 2018). For those living in cities, it has been found that Afro-descendants are twice as likely to live in slums than non-Afro-descendants. This lower socio-economic development can be observed across a number of other metrics, such as education levels, employment and representation in decision-making positions within both the private and public sector.

It should be noted that the experience of afro-descendants of this region is not exclusively negative. For instance, in Venezuela, the majority of Afro-descendants have high political representation and are not considered a marginalised minority (Freire et al., 2018).

Europe: Tracking PAD in Europe is a challenge in itself: the tracking of race or ethnicity is largely inconsistent between different countries. Out of 41 European countries, 19 do not collect data on ethnicity. These countries rely on more indirect variables such as citizenship or place of birth to estimate their population's ethnic diversity. Most others ask for nationality rather than the more explicit term ethnicity (Simon, 2012, p. 1376). There is political reluctance to produce racial statistics, despite the assessment that such statistics are important for the identification of discrimination and the implementation of policies to address it (Simon, 2012, p. 1367). PAD in the region appear to be designated mainly as Black Europeans or Afropeans. Despite these limitations, estimates have been made: most of the time the number put forward is around 7 million (Small, 2018, p. 1182), although some estimates go as high as 15 million (Minorities Rights Group International, n.d.). PAD in Europe come from different contexts, the main ones being colonial background, refugees and students (Clarke, 2012, pp. 3–4). This population is unevenly distributed between countries, with colonial histories largely shaping the numbers and origins of PAD – though estimates are variable, France seems to harbour the largest share of the population, with around 3 million; the UK follows with about 1.8 million (Minorities Rights Group International, n.d.).

PAD in Europe are subject to discrimination often based on skin colour – they are more likely to be unemployed or to end up in jobs where they are overqualified; they face prejudice in access to quality housing – in France, for example, an old estimate from 2002 shows that more than a third of households from Sub-Saharan Africa lived in social rented housing; these are often largely built in suburbs around the cities, resulting in spatial segregation for afro-descendant communities. PAD are also subject from racial profiling on the part of the police,

are exposed to an unfavourable justice system and generally suffer from stereotypes and prejudices (Clarke, 2012). In 2014, a demand catalogue was put together by various associations across Europe, pointing to the necessity of more comprehensive data collection, as well as containing specific demands to address prevalent discriminations in terms of employment, racial profiling, asylum, civic education and participation, and institutional education (*Demand Catalogue by People of African Descent & Black Europeans*, 2014). In 2019, the European Parliament adopted a resolution recognising the rights of PAD within the European community and calling for action regarding the discrimination they face (Fundamental Rights of People of African Descent, 2019).

Asia: African migration to Asia, both forced and voluntary, has continued for almost two millennia. However, Afro-Asian communities remain ‘invisible’ or as forgotten minorities (Jayasuriya, 2006). Africans in Asia and their descendants have been called by many terms and ethnonyms throughout the centuries. This tends to blur the African presence in Asia but it also raises questions about its origins. Enslavement of Africans can be traced back to the Pharaonic times, as is illustrated in Egyptian art. Black slaves were also found in the Hellenistic and Roman worlds. The geographical proximity of Africa to the Middle East and the maritime links across the Red Sea meant that Africans migrated to the Arabian Peninsula. For instance, Ethiopians, Somalis, and Nubians, who were mostly enslaved, migrated to Arabia (Jayasuriya, 2006).

Today, PAD in Asia are small ethnic minorities. Africans have intermarried with other ethnic groups in Asia and their physiognomy has been diluted. Many African migrants have now assimilated and became a part of the kin system of Asian societies. From Baburu people in Maldives, Takruni, Abid, and Mawalid in the Middle East, to Siddi communities in Pakistan and India, assimilation has concealed their genealogy and history. Hence, census in many Asian countries rarely identifies PAD as Africans, rather as a group/subgroup of minorities within the context of Asian ethnicities. This situation is clearly in contrast to the African diaspora in the America or other continents (Jayasuriya, 2006). Historians have to take a different approach when researching Africans in Asia. Reliance on archived documents can be misleading as Africans in Asia had many ethnonyms and sometimes their ethnic origins were not recorded. Due to the lack of clear identification in census and lack of academic research, we struggle to find literatures focusing on the socio-economic situation of PAD in Asia.

2.2 Racial discrimination

Further to understanding who PAD are, an understanding of disproportionate human rights impacts on PAD needs to be situated within the concept of racial discrimination. This concept will be core to our research as it provides the basis for recognising the disproportionate impact of climate change on PAD.

The International Convention on the Elimination of All Forms of Racial Discrimination (International Convention on the Elimination of All Forms of Racial Discrimination, 1969) defines discrimination as:

“any distinction, exclusion, restriction or preference based on race, colour, descent, or national or ethnic origin which has the purpose or effect of nullifying or impairing the

recognition, enjoyment or exercise, on an equal footing, of human rights and fundamental freedoms in the political, economic, social, cultural or any other field of public life.”

Race is therefore one of the forms of discrimination and racial discrimination can be identified by its impact on human rights. Additionally, discrimination may take the form of direct or indirect discrimination. Direct discrimination can be identified where laws and practices have the purpose of impairing the human rights of a group of people. Whilst indirect discrimination refers to laws and practices without intentional discrimination but whose *effects* nonetheless result in violating human rights (Shirane, 2011). According to this understand, even well-intentioned or neutral policies may have negative effects on race relations and lead to discrimination.

The latter form of discrimination is particularly relevant to the discussion of the human rights impact of climate change given climate change is a physical event which does not in itself discriminate between groups of people. The same can be said of policies whose primary purpose is to address climate change mitigation and adaptation.

Beyond the distinction of direct and indirect, within the context of PAD, the concept of structural racial discrimination provides a critical lens for identifying racial discrimination. This concept cross-cuts the direct and indirect forms, highlighting embedded racial discrimination within society. Pager and Shepherd (2008) offer a helpful framework for understanding the different forms of structural discrimination, often interchangeable with other terms such as institutional discrimination, structural and institutional racism. Three forms of structural discrimination are described - historical discrimination, discrimination arising from state policies and practices and the accumulation of disadvantage.

Historical discrimination links the contemporary inequalities and impairment of human rights of PAD to historical discrimination, notably slavery and other state-led practices explicitly impairing the human rights of PAD, i.e. direct discrimination. Historical racial discrimination as a legacy of slavery has been recognised by the international community and its contemporary impact is identified from the disproportionate representation of PAD amongst the poor, low rates of participation and representation in political and institutional decision-making processes and reduced access to education, amongst other indicators (General Recommendation No.34, 2011). Intergenerational poverty experienced by PAD can also be traced back to the slavery regimes which marginalised them (General Recommendation No.34, 2011), meaning that historical discrimination can continue to impair human rights even if all contemporary forms of discrimination are eliminated (Conley, 1999).

The discrimination of state policies and practices is more closely linked to indirect discrimination, that is practices that unintentionally perpetuate or create a disadvantage in the enjoyment of human rights for certain groups. In the case of PAD, Pager and Shepherd (Pager & Shepherd, 2008) present examples in the provision of funding for public education and criminal justice reforms in the United States which, unintentionally, resulted in poorer educational outcomes and higher rates of imprisonment for African Americans respectively.

Accumulation of disadvantage draws attention to the linkages and spillover effects of disadvantage from one domain into others. Through “processes of cumulative (dis)advantage across the life course, and feedback effects, the effects of discrimination can intensify and, in some cases, become self-sustaining” (Pager & Shepherd, 2008). One illustrative example given in the context of PAD is the evidence that discrimination in housing leads to poorer health outcomes and more limited educational and employment opportunities.

In the face of these structural racial discriminations towards PAD, CERD recommends the adoption of measures to address discrimination as well as special measures or affirmative action (General Recommendation No.34, 2011). Special measures respond to the need for correctionary temporary action to eliminate racial discrimination. In relation to PAD, the CERD General Recommendation no34 notes a number of focus areas for state action (General Recommendation No.34, 2011). Of particular relevance to the subject of this study on the impacts of climate change on PAD are improving access to justice; encouraging greater political participation and participation in decisions which affect them; eradication of poverty and ensuring access to high quality education and healthcare. The need for strengthening special measures in these areas is addressed within the case studies and recommendations.

2.3 Environmental Justice

From a theoretical standpoint, environmental justice is an overarching concept on the backdrop of which this research will be presented. Environmental justice challenges traditional environmentalist theories by centering their approach around people and the impacts of environmental risks on those people (Schlosberg & Collins, 2014, p. 360). The field was originally concerned with the unequal impacts of environmental pollution on different racial groups or social classes. Indeed, people of color and of lower socio-economic status have been demonstrated to bear an unfair share of the consequences of environmental pollution (Mohai et al., 2009, p. 406).

Environmental justice combines the question of the damage our modern societies do to our environments with demands for social justice. Environmental conditions are seen as yet another symptom of the larger reality of social and economic inequity. In this sense, environmental justice is aimed at remedying existing and imminent injustice in the distribution of environmental costs, benefits, and conditions on the grounds that all are equal and have equal rights (Schlosberg & Collins, 2014, p. 361). Environmental justice also constructs environmental problems as social problems: that is, the social location of a particular group positions them differently in front of an environmental issue (Taylor, 2000).

The discourse of environmental justice evolved with the ever-increasing importance of climate change. This new problem has sparked a renewed interest in the notion of vulnerability: ecological vulnerabilities can result from historical injustices and differences in power, although some are primarily a matter of geographical location. An often-cited example is that of Hurricane Katrina, which made it plain that structural inequalities produced by racism can determine who is most affected by severe climate disasters, and in turn disasters can greatly intensify social and political inequalities (Cuomo, 2011, p. 694). From such observations emerges the notion of climate justice: a call to take into account the ethical and human rights dimensions of climate change (White-Newsome, 2016, p. 12).

Climate justice, as an extension of environmental justice, lays the ground for the present research. Indeed, the rights-based approach to climate change, which we will use in this research, derives from environmental and climate justice concerns. This approach is discussed below.

2.4 Human Rights-Based Approach

A human rights-based approach, which uses international human rights standards to analyze the inequalities, vulnerabilities and discriminations that undermine human rights, (OHCHR, 2020d) will be used in this report.

States have the obligations “to respect, protect, fulfil and promote all human rights for all people” while respecting equality and non-discriminatory principles (Barrio Lamarche et al., 2019). In effect, to comply with international human rights law, States must take actions to mitigate climate change and adapt to its consequences, especially by protecting the most vulnerable people (OHCHR, 2020d). For instance, this obligation is recognized in the Paris agreement, where it is stated that “Parties should respect, promote and consider their respective obligations on human rights (Barrio Lamarche et al., 2019).”

Therefore, in practice, the fulfilment of human rights should guide climate mitigation and adaptation policies. By focusing on human rights to assess the impacts of climate change and climate-related policies, the human rights-based approach can offer accountability and compensation for human rights violations, but can also drive positive changes in governmental policies and measures (Lewis, 2018).

To adequately use this approach, each right impacted by global warming must first be defined. From the outset, climate change can have impacts on the right to health, life, food, water, housing, education, work, participation, and culture (Barrio Lamarche et al., 2019). These rights are interrelated, which means that the fulfilment or violation of one right might affect dimensions of another right. The human rights listed below are not exhaustive but have been identified to be affected by climate change and climate-related policies.

Moreover, the recommendation to eliminate racial discrimination against PAD, as presented in CERD’s General recommendation No. 34, highlight those rights that are considered most at risk in situations of racial discrimination towards PAD. The CERD emphasizes the following rights: right to culture (protection of traditional lands, knowledge, resources, identity, language, religion, art), right to participate in public affairs, as well as civil and political rights, and economic, social and cultural rights (Committee on the Elimination of Racial Discrimination, 2011). The definition of the main human rights addressed in this research can be consulted in Appendix A (p. 64).

2.5 Research Questions

Drawing on the analytical frameworks described above, two research questions were developed and are addressed in this report.

The first is - which human rights by PAD are most likely to be affected by climate change effects and associated policies? This question implies a rights-based approach to climate

change for which specific human rights drawn from the Universal Declaration of Human Rights and other relevant conventions will be examined. As indicated, particular human rights have already been identified as at risk from climate change and climate policies as well as critical common sources of racial discrimination towards PAD.

The second question is to what extent are PAD disproportionately affected by the effects of climate change and associated policies? For this, racial discrimination and its indirect and structural forms will serve as a lens for identifying differentiated and disproportional impacts on PAD. Environmental justice is an additional, albeit secondary dimension that will be considered, highlighting how climate change can result in placing an unfair share of the negative social impacts of climate change and associated policies on PAD.

3. Methodology

3.1 Introduction

The methodology adopted for the research included two parts:

1. **Literature review** of academic and non-academic sources for empirical evidence of effects on the enjoyment of rights and disproportionate impacts due to climate change on PAD globally. This included the physical impacts of climate change, as well as the impact of policies introduced to mitigate and adapt to climate change.
2. **Development of 4 case studies** to understand in more depth the contexts in which human rights of PAD are affected by climate change as well as provide evidence of the extent to which the effects can be attributed to racial discrimination. The case studies were developed through a combination of literature review and interviews with subject-matter experts.

For the literature review, we collected evidence of impacts on PAD both from studies linking these directly, as well as by inferring the likely impacts on PAD given their geographic concentration, socio-economic situation as well as evidence for comparable minority groups.

The four case studies were chosen to complement the data gathered from the literature review; to illustrate in more detail the rights affected by climate change in its various guises: physical effects, mitigation policies and adaptation policies. In the first instance, information regarding context and human rights affected was gathered from publicly available sources. This was followed by a series of interviews with subject-matter experts drawn from NGOs, international organisations and academia familiar with the case studies.

The primary purpose of the interviews was to fill any data gaps on context, elaborate on the types of rights affected and confirm to what extent racial discrimination is creating a disproportionate impact on PAD within the specific case studies. Interviews were the preferred approach for data collection in order to explore the nuances of how the rights of people of African descent may be affected in different contexts and the forms of structural racial discrimination on this group.

3.2 Case Study Selection

Initially, a longlist of seven case studies was created based on seven guiding criteria - see Table 1 in Appendix B (p. 66). The objective of these criteria was to support the choice of a final sampling that illustrates the variety of ways that climate change affects PAD globally.

Case study selection criteria:

- mixture of regions where PAD live
- at least one case study per manifestation of how climate change might affect human societies, namely an example of a physical impact of climate change, an example of a mitigation policy and one of an adaptation policy
- a mixture of rural and urban cases
- whether there has been a court case raised in relation to the human rights violations
- international relevance, that is whether the case study can serve as an example for disproportionate impact on PAD globally
- variety in the types of rights affected where possible
- availability of data

Following an initial meeting with OHCHR and further deliberation by the authors, the final shortlist of four case studies was determined, as shown in the table below. It should be noted that a major decision factor was the availability of information and coverage of the different manifestations of climate change.

3.3 Interview process

Interviewees were identified, in the first instance, through a combination of contacts provided by OHCHR and individuals identified as part of our literature review for the case studies. We also used a snowball strategy - asking interviewees to recommend individuals they believe could provide valuable input to the study. Interviewees were provided with the IHEID Ethics Guidelines and authorization was requested to record interviews.

All interviews were undertaken through semi-structured interviews to ensure focus on the areas of interest whilst also enabling interviewees to provide additional detail where appropriate. The interviews were conducted in pairs to facilitate standardizing the interview approach and content collected. The list of interviewees for each case study is shown in Table 2 in Appendix B (p. 67).

4. Literature Review

In this section, we will examine the existing literature on climate change, racial discrimination and PAD. We first explore the intersection between climate change and human rights, breaking it down into different regions of the world. We then do the same with the intersection of climate change and racial discrimination.

4.1 Climate Change and Human Rights

Several consequences of climate change are expected to impact the full enjoyment of human rights. Extreme weather events such as droughts, storms, heat waves, or other disasters will be more recurrent. Rising sea levels and melting glaciers and ice sheets will also occur. These issues will exacerbate problems such as access to drinking safe water by diminishing water availability. The right to food could be impacted if warming temperatures affect agricultural yields, prices, and food security. Climate change could also multiply forced migrations and make migrants more vulnerable (Barrio Lamarche et al., 2019).

In a 2019 report, the Human Rights Council developed on which human rights are impacted by climate change. It stated that global warming could negatively influence the enjoyment of human rights, including the right to life, the right to food, the right to health, the right to adequate housing, the right to self-determination, the rights to safe drinking water and sanitation, the right to work and the right to development. Other rights affected include the right to a livelihood, as well as the right to a safe, healthy, and clean environment (Human Rights Council, 2019).

Besides these potential consequences, the Council mentions factors that can increase the vulnerability of people towards climate change. Vulnerability is enhanced by factors such as "geography, poverty, gender, age, indigenous or minority status, national or social origin, birth or other status and disability" (Human Rights Council, 2019). In this context, the Council especially emphasizes the disproportionate impact on people suffering from disabilities. The linkages between climate change and human rights should thus be seen through the lens of intersectionality, which means the vulnerability of people is multiplied by the cumulative factors aforementioned. As we will see, PAD are particularly concerned, especially when they experience other factors that lead to situations of vulnerability, while their socio-economic, ethnic, and minority status make them more at risk in front of climate change.

4.1.1 North America

This section addresses the consequences of climate change on the rights of PAD in North America. Broadly, impacts on the right to life, to health, to food, to safe drinking water, to work, to education and the right to adequate housing have been identified in the literature.

In the United States, the rights to life and health of PAD are particularly threatened. For instance, PAD are more vulnerable to heat waves because they are more likely to live in neighborhoods where there are few trees and heat-trapping pavement is more prevalent (Hollis, 2019). Morello-Frosch et al. (2009) have highlighted this important inequality by showing that the rate of heat-related death of PAD is 150 to 200% greater than for non-Hispanic whites. PAD are also three times more likely to be victims of asthma incidents and to die from such health issues than non-Hispanic whites (Morello-Frosch et al., 2009).

The right to education of PAD in the US is threatened in the aftermath of extreme climate events. For instance, the National Center for Disaster Preparedness (NCDP) estimated 163,105 children between the ages of 0 and 19 years old were displaced by Hurricane Katrina from both Louisiana and Mississippi, irrespective of their race. Of that number, it was estimated that only between 81,595 and 94,650 children returned to their home community or home state (Abramson et al., 2007). PAD children were especially likely to end up in schools

in which they were the minority, as opposed to in New Orleans, where they made up more than 95% of all students in the public schools. These displaced PAD children reportedly experienced harassment in their new schools, due in part to negative stereotyping of Katrina evacuees (Lori Peek, 2010).

The right to adequate housing is also threatened by extreme climate events. For instance, during Hurricane Katrina, about one in three people who lived in the area hit hardest by the hurricane were PAD (Sherman and Shapiro, 2005). This case highlights that climate change can threaten the security, peace, dignity, and habitability of housing, while having a disproportionate impact on PAD.

4.1.2 Latin America

We did not identify any literature which comprehensively tackles the impact of climate change on PAD at a regional or national level. Nonetheless, this section briefly sets out how climate change is predicted to affect LAC and makes observations on the impacts and rights of PAD that are most likely to be affected in this region based on what is known of their socio-economic circumstances and geographical distribution.

A paper published in 2015 synthesised existing understanding of the physical effects of climate change in LAC and their impacts on economic development opportunities in this region (Reyer et al., 2017). According to this study, climate change will induce altered precipitation regimes, a strong increase in heat extremes, higher risks of droughts, increasing average intensity of tropical cyclones and frequency of the most intense storms and sea level rise.

Coastal communities are identified as high risk from hurricanes and sea level rise, storm surges and coastal flooding. Some of the highest concentrations of people of African descent are in coastal communities, such as the Pacific coast of Colombia and the Atlantic coasts of Costa Rica, Honduras, Nicaragua, and Panama. In many Caribbean states, between 20 and 50 percent of the population resides within the low-elevation coastal zone (Satterthwaite et al., 2007). More generally, several LAC countries have a large share of their urban population living less than five metres above sea level, making them more vulnerable to climate change. The majority of Afro-descendants live in cities, hence can we infer they are at higher risk. Weather-related events are therefore likely to have a negative impact on the enjoyment of rights of PAD, notably right to life and cascading effects on other rights.

Climate change is expected to affect the right to food by lowering agricultural yields and fish stocks in LAC. These impacts are expected to disproportionately negatively affect rural communities, particularly communities, such as afro-descendant communities which depend directly on the local natural resources for their livelihood. It is possible to infer the vulnerability of rural afro-descendant communities from statements such as the following in relation to Indigenous communities given their similar circumstances:

“The close relationship of many indigenous peoples and some minorities to their environments makes them especially sensitive to the impacts of climate change.” (Baird, 2008)

The FAO has also raised the issue of the vulnerability of food production systems in Latin America to the variability of climate and to the consequences of drought, flooding and other natural disasters (Food and Agriculture Organization of the United Nations, n.d.). Food productivity impacts are likely to affect even large-scale producers, increasing prices for consumers such as urban populations. Afro-descendant communities in cities could again be

disproportionately impacted through these effects due to the higher prevalence of poverty in these communities.

Climate change is anticipated to negatively affect the right to health in the LAC region, although the prevalence and distribution of impacts on human health is unclear. Dengue and cholera outbreaks may increase due to climate change, and their impact may be exacerbated by urbanisation. The impact on malaria is mixed, with increases in some areas and decreases in others as precipitation patterns change. North-western Colombia, a region associated with afro-descendant communities, has experienced an increase in malaria incidents associated with rising temperatures (Siraj et al., 2014).

The literature review has revealed a significant gap in research and understanding of how climate change policies affect PAD. Instead, the focus of studies has been on larger groups which the Afro-descendant community overlaps with or share similar conditions to, such as minority groups, the poor, urban poor, rural and indigenous communities. The small literature that does exist is focused on communities that live in rural areas, close to nature, whose livelihood can be characterised as subsistence farming complimented by trade in nature-derived products such as timber.

For instance, biofuel production as an alternative to fossil fuels is a climate mitigation measure that poses a threat to the livelihood of afro-descendants depending on farming for their livelihood. Evidence for this exists for the community of Afro-descendants in Colombia (see more detail in the case study). This country is not unique however, with the FAO raising the bioeconomy as a risk for food security for small farmers and impoverished communities across LAC.

Reforestation is another important climate mitigation strategy for which concerns have been raised regarding its impact on the rights of indigenous and afro-descendant communities. The Secretariat for Natural Resources and Environment of Honduras called for the creation of safeguards of Indigenous and Afro-descendant culture within the framework of the REDD+ overseen within by the United Nations Framework Convention on Climate Change (UNFCCC) (Secretariat for Natural Resources and Environment of Honduras, 2019). The document financed by UN bodies lists a number of recommendations to ensure that projects to reduce deforestation recognise the rights of Afro-descendant and indigenous communities. The need for these safeguards is related both to the greater vulnerability of this group to the effects of climate change because of their dependence and connection to nature and their environment as well as the recognition of the traditional knowledge and intellectual property of these communities associated with the forests that need to be protected from deforestation. Implicit in the safeguards requested are the perception that protection of forests as a climate mitigation measure may jeopardise the right to maintaining their culture and livelihood; and be undertaken without respecting the right to participation of these communities.

Major renewable energy projects have also been identified as having negative impacts on the enjoyment of rights of PAD. In 2000, the Association of Saramaka Authorities and the Forest Peoples Program, requested the Inter-American Court of Human Rights (IACHR) to declare the State of Suriname guilty for violating the rights of the Saramaka people, an afro-descendant community living in Suriname, for the losses associated with the construction of the dam Afobaka hydroelectric plant in 1960 and concessions to logging and mining

companies in the area. In 2007, a hearing was held and the IACH agreed in favour of the Saramaka people (*Case of the Saramaka People vs Surinam*, 2007).

Finally, efforts have been made in the LAC region to support a rights-based approach to climate change activists. Notably, countries from the region have strongly supported resolution A/HRC/40/L.22/Rev.1 of the Human Rights Council, entitled “Recognizing the contribution of environmental human rights defenders to the enjoyment of human rights, environmental protection and sustainable development” (Recognizing the Contribution of Environmental Human Rights Defenders to the Enjoyment of Human Rights, Environmental Protection and Sustainable Development, 2019). They also signed a regional agreement - the Escazú Agreement - which aims at the protection of environmental human rights defenders (Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean, 2020).

4.1.3 Europe and Asia

Our research has yielded relatively few examples of studies applying a human rights framework to the analysis of climate change case studies in Europe. There exists, however, literature examining the impacts of floods and heat waves - these being some of the most common disasters Europe is facing. For example, a study on flooding demonstrates that there is a wide range of negative impacts: not only mortality and injuries, but also illness induced by contamination of water supplies; chronic health and mental health effects; and the disruption of regular healthcare services. (Hajat et al., 2003) Though the right to health is not explicitly mentioned here, the article does illustrate the threats posed to this right by floods in the region.

The same scarcity of examples can be observed when looking into human rights and climate change adaptation. Research on European adaptation policies cover a wide range of aspects: what triggers the development of adaptation policies, what the main vulnerabilities to climate change are, which sectors are prioritised in adaptation, the barriers to implementation, the funding sources, the stakeholders involved, the key aspects of successful policies (Aguiar et al., 2018; Biesbroek et al., 2010). However, these overview publications make no mention of the human rights aspects of adaptation policies. A rare example is a study by Boeckmann and Zeeb (2014): they have evaluated the consequences of adaptation policies on health from a social justice perspective, analysing whether adaptation measures simultaneously serve to strengthen health equity. The study ranked countries’ adaptation policies according to the variety of policies implemented and their consideration of social justice. Of the 21 countries examined, Austria and Wales are the two mentioning social justice as a value and a goal of their adaptation policies (Boeckmann & Zeeb, 2014).

As is in Europe, it is very difficult to find cases of climate change intersecting with human rights in Asia. Most of the cases illustrate the impact of climate events, such as rising sea level in several archipelago countries, or the effort to mitigate the negative effects of such events. Yet, none of them showcase the violation of human rights. For example, Maldives has been seen as being at the forefront of addressing climate change impacts. The low elevation of the islands makes them vulnerable to coastal erosion, salinity intrusion, water scarcity, and change in monsoon patterns and hence rainfall (Stojanov, et al., 2017). Consequently, migration has been an adaptation strategy for the population, which will impact its people, including Baburu Kara people of African descent that constitute a minority of its population (Jayasuriya, 2006).

Nevertheless, there is a lack of academic research pointing out whether this strategy has a direct correlation to human rights violation of those people.

4.2 Climate Change and Racial Discrimination

Within the climate change international community, the 5th IPCC Report (Olsson et al., 2014) recognizes that climate change impacts interact with social categories such as gender, socio-economic status, or race, with the result that some categories of the population are more exposed than others. Particularly, the report acknowledges that these impacts can be disproportionate and reflect or reinforce inequalities linked to race and racial discrimination.

There are historical and contemporary forces and policies that reflect indirect racial discrimination - for example in terms of housing policies - and limit certain groups of people in their ability to choose where to live, thereby making them more vulnerable to environmental damage and climate change impacts (Harlan et al., 2015). Similarly, Hardy et al. (2018) state that structural racism, rather than overt racial discrimination, is responsible for creating racial disparities that create and perpetuate an uneven access to resources, which increases vulnerability to climate impacts and reduces the adaptive capacity of these communities. This form of racial discrimination can also take the form of a lack of representation and limited access to decision-making, which prevent governments from adequately protecting their more vulnerable citizens from the differentiated impacts of climate change (Thomas et al., 2019).

In that sense, climate change appears as an additional layer juxtaposing itself onto an already existing pattern of racial discrimination, emphasizing and reinforcing existing inequalities and creating new risks for the people already disadvantaged by these inequalities.

4.2.1 North America

In the United States, because of their poorer economic situations, African Americans often live in more polluted areas, closer to highways or polluting power plants. Research has shown that race is the most important determining factor for their health situation, over the income level. Indeed, because Whites and Blacks live in segregated and homogeneous communities, studies have demonstrated that upper-income Blacks are more affected than low-income whites (Badger, 2014). PAD are thus disproportionately affected by the consequences of global warming due to structural racial discrimination.

Therefore, race strongly influences the consequences of global warming on African Americans, but not only in the realm of health. Other researchers like Hoerner and Robinson have also shown that the disproportionate poverty level of African American families reduces their resilience towards climate events by reducing access not only to medical care and health insurance, but also to housing insurance (APHA, 2018). Their access to adequate housing is thus also affected. In addition, African American communities disproportionately live the indirect consequences of global warming, where their economic burden is higher compared to non-Hispanic whites. For instance, the price shocks caused by climate events make them more vulnerable to higher energy bills, unemployment, and recessions (Hoerner & Robinson, 2008).

Recent political initiatives in the United States aim to address indirect racial discrimination in climate policies. The city of Portland in Oregon is one of the first cities in the country to consider the consequences of environmental policies on minorities generally. In 2015, the Bureau of

Planning and Sustainability of Portland designed its new climate action plan while addressing economic inequalities and racial discrimination within every action. The city thus hopes to fight structural discrimination and empower minorities (Daigneau, 2017). While African Americans are not specifically mentioned, we can presume they are targeted by this initiative, as they are recognized as a minority group in the country (Pollard, 1999).

The former US presidential candidate Beto O'Rourke embraced a similar strategy to fight the environmental injustice enhanced by climate change. In his climate action plan revealed last year, he put emphasis on minority groups that are already vulnerable to climate events and pollution because of racial discrimination. Concretely, O'Rourke suggested financing affordable housing, better transportation systems, and quality health care for the most impacted communities, such as African Americans (Mock, 2019). Another example comes from newly-elected President Joe Biden's climate plan. He promises to "stand up to the abuse of power by polluters who disproportionately harm communities of color and low-income communities" by taking actions against polluting industries and developing inclusive and community-driven solutions (*Plan for Climate Change and Environmental Justice | Joe Biden*, 2020). O'Rourke and Biden's positions suggest a recognition of racial discrimination and environmental justice concerns.

In Canada, climate change also poses public health issues, causing more air pollution, heat waves, wildfire, and infectious diseases (Clean Energy Canada, 2019). Confronted with racial discrimination, PAD in Canada are more threatened by climate change than other groups. Most of Black communities lack access to political and economic resources, which can threaten their lives. For instance, some Black communities in the Halifax region live in areas bordering forest zones, where historical racial discrimination have push them far from good public infrastructure. With global warming causing more forest fires, these populations are directly vulnerable. Moreover, the fact that Black communities have less developed infrastructure means that their protection against climate events like storms or hurricanes is weak. Other less direct threats could also affect African descendants, such as the rising costs of energy, transportation and food that climate change creates (Borden Colley, 2019).

4.2.2 Latin America

Within the literature review, there is evidence of racial discrimination interacting with climate change, although it is not explicitly raised in relation to PAD, but rather identified by our knowledge of their socio-economic situation and geographic concentration.

For instance, the Reyer et al (Reyer et al., 2017) study suggests that "climate change is expected to accentuate pre-existing vulnerabilities in LAC". Afro-descendants, who are disproportionately represented among the poor in LAC are therefore anticipated to suffer more from the impacts of climate change. This therefore presents evidence of accumulated disadvantage driven by climate change interaction with pre-existing effects of historical and indirect racial discrimination.

Additionally, two studies were reviewed which considered the specific impact of climate change on the urban poor in LAC (Hardoy & Pandiella, 2009); (Winchester & Szalachman, n.d.). The vulnerability of urban poor to climate change in LAC is relevant to PAD given that over 80% of PAD in the region live in cities and many of these live in slums. In Nicaragua for instance, 93% of urban Afro-descendants live in slums (Freire et al., 2018). Cities in LAC are identified as vulnerable to climate change because of pre-existing challenges such as high

levels of poverty and urban expansion into areas prone to flooding, landslides and other weather-related risks. Many of the vulnerabilities of Afro-descendent people are likely related to these aspects - urban poverty is characterised by precarious employment, poor quality housing and insecure tenancy (even illegal housing), living in areas with poor infrastructure (water, health, sanitation etc.), and overcrowding. On top of this, the urban poor tend to settle in the areas at high risk of direct impacts of climate change. Finally, these risks are exacerbated by poor planning and limited disaster risk reduction efforts. According to Hardoy and Pandella (Hardoy & Pandiella, 2009), in LAC, there is a “long-evident incapacity of governments to address risk and to integrate development in the reduction of vulnerability”.

The interaction between climate change policies and racial discrimination is the least addressed in the literature. It can be inferred however for instance from the ongoing injustices related to the construction of a dam for a hydro power plant of the Saramaka people. According to a report published in 2018, the State of Suriname has not taken the necessary measures to carry out the Court’s recommendations and activities continue to violate the rights of Saramaka people (GRISUL, 2018). The reasons for such failures are likely to be linked to historical and indirect racial discrimination which results in unequal access to justice for the Saramaka people. The other case study showing evidence of racial discrimination identified were the adaptation policies in response to floods in the Esmeraldas, Ecuador. These are described in detail within the case study itself.

4.2.3 Europe and Asia

Because of the lack of ethnic statistics in Europe, the literature shows a significant gap in covering the intersection between climate change and racial discrimination.

For example, the study on floods mentioned in the previous section acknowledges that certain demographic groups such as the elderly or ethnic minorities are more exposed to the effects of the floods; however, the only concrete disaggregated demographic data it mentions is from US sources (Hajat et al., 2003). An analysis of the 2003 heat wave in France also tackles the importance of socio-economic factors such as poverty, age and social isolation in increasing vulnerability to such disasters – however, race and racial discrimination is not one of the criteria discussed (Poumadère et al., 2005). A 2012 literature review demonstrates that vulnerability mapping of climate change impacts in Europe does exist (Lundgren & Jonsson, 2012). Vulnerability mapping suggests an understanding of the differentiated impacts of climate change on different populations - which could be connected to racial discrimination. However, though this review mentions race/ethnicity as a criterion in its theoretical review of vulnerability mapping, none of the European case studies presented in the paper actually use race as a factor (Lundgren & Jonsson, 2012). Similarly, a mapping of flood vulnerability in Italy mentions race as a potentially relevant demographic factor in its theoretical part, but goes on to not include it in the actual mapping (Frigerio & De Amicis, 2016). As this overview shows, the social impacts of climate change in Europe are being touched upon mainly through vulnerability assessments, or through focussing on a particular disaster (such as floods) or impact area (such as health). However, the literature reviewed has demonstrated a lack of consideration for the potential negative impacts of racial discrimination.

As it is in Europe, our effort to assess the intersection between climate change impacts and racial discrimination towards PAD in Asia has not been as comprehensive as in other regions

as we are lacking a socio-economic portrait of the PAD and hence, significant evidence on this intersection.

5. Findings and Results

This section presents the case studies, starting with those relating to climate change's physical effects and climate adaptation policies and followed by those related to climate mitigation policies:

1. Hurricane Katrina
2. Floods in Esmeraldas
3. Cap and trade in California
4. Biofuel policies in Colombia

5.1 Case study: Hurricane Katrina in Louisiana, United States

5.1.1 National and Regional Context

Who are People of African-descent in New Orleans and Louisiana?

In New Orleans and Louisiana, as in the United States in general, PAD are commonly referred to as "Black Americans", "African Americans", and "Afro-Americans". For the purpose of this research, we refer to those terms as PAD because this is the operative concept we use, as defined in the theoretical framework.

A study by Miller and Rivera (2007) shows that since the Mississippi Flood in 1927, the socio-economic situation faced by PAD and other ethnic groups in the aftermath of natural disasters has been relatively the same. Natural and climate-related disasters have a profound and direct influence on the migration patterns of PAD because of State neglect of their needs in the event of emergency situations. Hurricane Katrina laid bare the socio-economic inequities in the United States, especially with respect to natural and climate-related disasters.

Not only this socio-economic condition directly affects the viability of PAD communities within disaster affected regions, it also has significant effect on the social structure of the locations where they immigrate to, creating social imbalances that have created racial animosity towards them, which expressed through policy implementation, or lack thereof in the past (Miller and Rivera, 2007).

In our interview with Professor John Kiefer, hazard policy specialist from the University of New Orleans, he mentioned that New Orleans has almost 70% PAD population and it is almost perfectly correlated with the economically vulnerable population. "*There is almost 100 percent correlation between people in the low end of socioeconomic status and the African-Americans,*" (Kiefer, Oct. 19, 2020).

5.1.2 Case Study Description

On August 29, 2005, the most devastating hurricane to hit the US in generations made landfall in southern Louisiana. Classified as a Category 5 hurricane, Hurricane Katrina caused approximately \$ 75 billion damages to the US Gulf Coast. It hit New Orleans especially hard, leaving approximately 80% of the city flooded in up to 20 feet (6 meters) of water (Knabb et al., 2005). PAD made up a disproportionate share of the victims. About one in three people who lived in the area hit hardest by the hurricane was PAD. By contrast, one of every eight people in the nation is PAD (Sherman and Shapiro, 2005). By September 16, the death toll reached 1,336, which included deaths that were both directly and indirectly related to Katrina in five southern states (Rivera and Miller, 2007). Kiefer said that more than 1,000 people who died during Katrina were mostly poor PAD, with the most prevalent statistic being that they were mostly older people (Kiefer, Oct. 19, 2020).

The social injustices that took place in New Orleans during those days gained international attention. One of the studies illustrate, while the hurricane was hitting New Orleans, local residents and police had sought shelter, but tourists who could not leave were still in bars partying. Residents who could escape Katrina were on their way north, and those that could not were scattered between hotels, hospitals, shelters and the Superdome (Reagan *et al.*, 2005).

In national news media in the aftermath of the Hurricane, racial biases manifested to create an imaginary scene of PAD raping and murdering each other in shelters, incapable of controlling themselves in the face of confined habitation. The aftermath of Katrina represents a sacrifice zone, where the authorities left the PAD community in great disarray and fending for themselves, while suffering the brunt of catastrophe. As a result of reactive, ill-crafted public policy decisions, many people became internally displaced, some without the option of returning home. (Rivera and Miller, 2007).

Dr. Jason Rivera, expert on disaster response, emergency & recovery management planning, who published articles on PAD experience in the aftermath of Katrina, explained in our interview that President George W. Bush at that time was very hesitant to respond and took a long time to take any actions towards dealing with the hurricane. The Federal Emergency Management Agency (FEMA), the spearhead organization in dealing with disaster response, was also very hesitant and slow to respond, partly due to leadership dynamics. Director of FEMA at that time, Michael Brown, did not have a background in emergency management at all, and thus found it difficult to make important decisions regarding disaster response (Rivera, Oct. 6, 2020).

Although the official response from the federal government was very much lacking, it was not a stand-alone error, but rather a byproduct of a previous failure to invest in policies that would have minimized the damage and casualties. This inaction was tied to a legacy of racism not only within the US as a whole, but also in Louisiana, which is located in the deep South. “[There was a] *legacy of very direct racial discrimination, housing discrimination, segregation, in which as I’ve said before, people [were] forced to live in less-desireable, most-vulnerable areas. Their vulnerability itself could be a violation of human rights that precipitated these events. That’s one way I could argue.*” (Rivera, Oct. 6, 2020).

The slow response from the government was perceived by many to be race-driven. Many PAD felt that the Katrina relief effort would have been faster and more efficient if the affected areas had been inhabited by primarily white people. The events surrounding Katrina deeply affected the psyche of PAD throughout the country. The images of other PAD left to suffer while government officials failed to adequately respond had a profound impact on PAD's emotional response. More so than white Americans, PAD were deeply angered and depressed by the events surrounding the hurricane. What seems to have angered them the most is how the race of the victims played an apparent role in the government's slow response to the disaster (White et al., 2007).

International relevance

The case study of Hurricane Katrina illustrates the impact of how hidden systemic racism within different layers of US government and society was brought into light by the severity of climate change disaster. Rivera pointed out that Katrina shows the true face of US institutional racism that was quite hidden from the international scene at that time. He drew a direct line from Katrina to the ongoing Black Lives Matter movement in the US. *"What we saw this year with the Black Lives Matter movement is a response, a tipping point of people getting so fed up with what is occurring on a continual basis,"* (Rivera, Oct. 6, 2020).

Katrina also provides insightful lessons for the management of disaster response elsewhere in the world, highlighting the utmost importance of coordinated and targeted relief efforts toward the most vulnerable populations, especially racial and ethnic minorities.

Rivera also emphasized that the way the US government, from the local to the federal level, interacts with its people domestically is not necessarily the way it interacts with people abroad; where the presence of its military or other federal agencies are seen in many parts of the globe, at least in humanitarian aid situations. Manifesting such discrimination abroad would be potentially detrimental to the way that Americans interact, not only for the local populations, but for US foreign affairs and international relations. *"Perception is everything. If you lose the perception that you are supposedly a human rights advocating country, that you do the best for your people, that you go to other countries to stop human rights violations, that brings into question the merit of their argument"* (Rivera, Oct. 6, 2020).

5.1.3 Rights Affected

Right to life

As mentioned earlier, PAD made up a disproportionate share of Katrina victims. About one in three people who lived in the area hit hardest by the hurricane was PAD. By contrast, one of every eight people in the nation is PAD (Sherman and Shapiro, 2005). More than 1,000 people who died during Katrina were mostly poor PAD, with the most prevalent statistic being that they were mostly older people (Kiefer, Oct. 19, 2020).

As explained by Rivera in the case study description, the lack of incisive response from the federal government was a byproduct of a previous failure to invest in disaster-response

policies that would have minimized the damage and casualties. It was also tied to a legacy of racism not only within the US as a whole, but also in Louisiana, which is located in the deep South, as quoted in the abovementioned section.

This illustrates how the right to life of PAD was affected by Hurricane Katrina as a climate disaster, and violated by systemic racism incorporated within both the US federal, state, and local government response towards the disaster.

Right to adequate housing

As explained earlier in our theoretical framework, the right to adequate housing contains entitlements, including housing, land, and property restitution; equal and non-discriminatory access to adequate housing; and participation in housing-related decision-making at the national and community levels (OHCHR, 2014). These entitlements are violated by both local and state governments in the aftermath of Katrina.

Prior to Katrina, the poor PAD community in New Orleans had lived there for many generations. Kiefer explained that Louisiana had the highest rate of intransience, which means its citizens were the least likely to move and they had the highest sense of place and connection to where they live (Kiefer, Oct. 19, 2020).

As the post-Katrina recovery effort began, there was a large outcry from legal advocacy organizations that PAD and Latino communities were originally living in a very hazard-prone area of New Orleans. *“This was a byproduct of racial housing segregation over time. The city itself is under sea level to begin with, but African Americans and other ethnic minorities were living in an area that is more prone to flooding than other places in the city”* (Rivera, Oct. 6, 2020).

Immediately after Katrina, discrimination against poor PAD in New Orleans was apparent in the design of the reconstruction master plan, especially regarding state’s buyout of the property owned by black communities who were the most impacted and vulnerable. In our interview, Kiefer explained how the state government planned to sell them to developers, who would then build beautiful homes they would sell for half a million dollars.

“So right from the beginning, there was this plan that we were going to change the face of New Orleans. We were going to get rid of this worn down housing, this poor rental housing, and build big, nice houses” (Kiefer, Oct. 19, 2020). To a certain extent, he added, some of that actually happened, because in present time New Orleans is “not as black as it once was”. There were a lot of PAD that could not afford to come back.

The post-Katrina housing policies also impacted PAD’s right to own property, albeit indirectly. When they tried to rebuild their houses back, they had to rebuild according to the new zoning standards, which meant higher and stronger at the very least. It also means more expensive for the PAD “rental community”. Accordingly, there was a significant number of poor PAD that simply could not afford to come back because the housing price had become more expensive. Rebuilding assistance was tied to pre-Katrina housing values. As a consequence, many rich, white people were more eligible for assistance compared to their PAD counterpart.

“New Orleans had always struggled with affordable housing. And again, in a state, in a city where you don’t have the money, the government can’t really provide that additional funding for that, it becomes more challenging. So there was some intentional, again, with regard to the buybacks, and there was some unintentional with regard to the expectations of where folks are going to live” (Kiefer, Oct. 19, 2020)

There was also a choice in governance that left people out of the decision-making process, specifically the poor, PAD communities, in addition to poor Asian Americans, Latino, and generally anybody that had some sort of immigrant status. They were left out of that supposedly democratic process because the area of the city that was not redeveloped were the same places that these ethnic minorities were living. *“The city [government] saw them as a place of sacrifice in which they didn’t even have the ability to sit at the table to make a decision on whether or not to rebuild their home” (Rivera, Oct. 6, 2020).* Many of the public housing projects in the city, where the majority of residents were PAD, were chosen not to be rebuilt or renovated.

In summary, there was not only physical displacement of people because of the hurricane and subsequent flooding, but also the inability of some of those poor PAD people to return to the city because the city deliberately decided not to rebuild their residences at all or did not give them the means to do so.

Right to education

Several New Orleans public schools in poor PAD neighborhoods, which were already in terrible condition before Katrina, were the last to be rebuilt following the hurricane. Kiefer explained that the decision as to what schools were going to open followed the neighborhood’s revitalization and financial capability of each community.

“If you had money, if you were in a high socioeconomic status, you had the resources to rebuild. So, a neighborhood that had people coming back with the resources, their school was reopened. But the poor Black neighborhoods, who did not have the resources, who were trying to get money, who were trying to navigate the very complex problem, their schools were reopened last because they didn’t have enough people and money to reopen schools. ” (Kiefer, Oct. 19, 2020).

The National Center for Disaster Preparedness (NCDP) estimated 163,105 children between the ages of 0 and 19 years old were displaced by Hurricane Katrina from both Louisiana and Mississippi, irrespective of their race. Of that number, it was estimated that only between 81,595 and 94,650 children returned to their home community or home state (Abramson et al., 2007).

A majority of affected families relocated to Texas, Georgia, or other parts of Louisiana, although displaced children ultimately attended schools in every state across the US. Many of them had to adjust to demographically different schools in their new communities. PAD children were especially likely to end up in schools in which they were the minority, as opposed to in New Orleans, where they made up more than 95% of all students in the public schools. These displaced PAD children reportedly experienced harassment in their new schools, due in part to negative stereotyping of Katrina evacuees (Peek, 2010).

Right to food

As it was with schools, Kiefer mentioned that many grocery stores in poor PAD neighborhoods did not reopen “for a very, very long time” after Katrina, due to the same revitalization scheme logic used as on other basic infrastructures.

“Well, of course, if you're black, and you're poor, and you're in that neighborhood, and you don't have a grocery store, you don't have a school, you're not going to come back.” (Kiefer, Oct. 19, 2020).

Earlier in the days after the hurricane struck New Orleans, FEMA and other governmental agencies also reacted very slowly in response, as shown with the delayed food supplies and clean water to the main evacuation point at the Superdome (Treater, 2005).

Right to work

Many of the displaced PAD who were eager to return home, especially the older generation, lacked skills to re-enter the workforce and found it really difficult to find decent jobs after Katrina. *“It's a very challenging battle to get them employed. It's huge. [...] People didn't even know how to apply for a job. They didn't know how to use computers. [...] It was a very, very big uphill battle to get these folks back”* (Kiefer, Oct. 19, 2020).

Kiefer stressed that the city's pre-Katrina reliance on the service economy, especially hospitality and tourism, had not created opportunities for PAD to build necessary skills for the more competitive labor market. *“New Orleans had a service economy. So, there were a lot of jobs in the service economy. But that was people who lived paycheck to paycheck [...] cleaning tables, and janitors”* (Kiefer, Oct. 19, 2020).

He urged that even today the federal government should show more initiative in bringing manufacturing and other industries to the city, so that poor PAD can have good, resilient jobs with decent pay. So far, the predominantly white power in New Orleans's government still favors the service, like the casino industry, which relies on that ready-made population of poor PAD that live paycheck to paycheck as the source of labor. *“So, there's not been the motivation to the [local] powers that make these decisions to change that [...] That is the unfortunate situation”* (Kiefer, Oct. 19, 2020).

5.1.4 Evidence of Racial Discrimination

Direct racial discrimination towards PAD evacuees in the response phase and afterwards

By August 30, 2005, water covered a majority of New Orleans. After the rain stopped, sections of the city experienced looting. Some people viewed the looting as an act of survival and took what they needed while others took what they wanted. Although both white and PAD citizens of New Orleans under a desperate situation took articles from abandoned stores, PAD doing this were described as looters, while white people were described as people in desperation doing what they needed to to survive. The media portrayal of PAD as criminals and white as

survivors is a manifestation of the racial dichotomy. Such imagery reinforced the stereotype of “black savagery” – a people beyond saving. This ultimately affected the relief efforts as law enforcement officers diverted much of their attention to those “looting” for food, water, and medications (Rivera and Miller, 2007).

By September 4, thirty thousand people were evacuated out of the Superdome and another 20,000 people were evacuated from the Convention Center (Reagan et al., 2005). In response, there were a number of local reactions toward PAD trying to evacuate over bridges into the surrounding community. *“There were literally police and other emergency management officials from neighboring towns and parishes that literally stopped Black evacuees from going over town lines”* (Rivera, Oct. 6, 2020).

One of our literatures also illustrates vividly how the influx of many PAD into predominantly white areas were sometimes met with open resistance:

I don't know how to get this point across without being blunt, but white supremacists have dropped the pretense of code-speak and are saying flat-out, “don't let them back in,” using the n-word for emphasis. These raw words echoed at the police blockade on the Mississippi River bridge connecting New Orleans with the West Bank of suburban Jefferson Parish, where policemen from Gretna, a notoriously racist town, fired shots over the heads of Convention Center evacuees as they walked toward the on-ramp pursuant to instructions that buses were waiting on the other side to carry them to safety (Rivera and Miller, 2007, p. 515; see also Harris, 2005)

Dr. Rivera confirmed in our interview that racist remarks and discrimination towards PAD in the days after the hurricane was “very vivid and well documented”. He mentioned that this discrimination was present not only during the immediate relief services, but also subsequent recovery efforts (Rivera, Oct. 6, 2020). For example, there were some local politicians that explicitly resented PAD communities in the aftermath of Katrina. *“There was a local politician that basically said, ‘God did what we have been unable to do,’ which essentially he was talking about getting rid of these poor Black people and other people that they have been unable to do for years”* (Rivera, Oct. 6, 2020).

Prof. Kiefer cited the tendency of public officials, as well as American society in general, to blame the victims, which in the case of Katrina was often mixed with racial sentiment and stereotypes against poor PAD people. It shows a huge lack of empathy, not only among public officials, but also people with means (Kiefer, Oct. 19, 2020). Due to his involvement in New Orleans’ Local Emergency Planning Committee (LEPC) in the three years until Katrina, he often heard derogatory remarks from the city officials, for example:

“These people make bad decisions, they should have saved money, they should have had plans for that.”

and one of similar remarks that both he and his colleague heard after Katrina,

“Well, we have to get some buses to get the people out, because they've spent all of their money on crack” (Kiefer, Oct. 19, 2020).

Kiefer emphasized that this behavior of victim blaming should not be the attitude of public officials, both at the local or state level. Yet sadly, this is still a common behavior not only in New Orleans or Louisiana, but across the country (Kiefer, Oct. 19, 2020). Rivera also pointed out this victim blaming tendency from certain parts of American society. Evacuation in any disaster situation, he said, is not just a byproduct of “choosing to get in your car and go”. *“It is a function of one’s socioeconomic status, access to transportation, which in the American context, poverty, socioeconomic status is inseparable from race”* (Rivera, Oct. 6, 2020).

5.1.5 Other Key Insights

Lack of trust between government and PAD communities

There was not much done for vulnerable communities, particularly PAD, in New Orleans prior to Katrina because it was a poor city, and it did not have the resources to design resiliency measures for every measure of the population. LEPC was supposed to be a platform for local officials and citizens to discuss emergency planning. But in reality, the city officials decided not to share critical information with the public due to their distrust toward the communities and fear of mass hysteria despite an obligation to do so under federal law. Even the mayor at that time, Ray Nagin, knew that the city was unprepared to face a hurricane or any kind of disaster. But there was just a hope that it would not happen during his four year term, and that the next mayor would have to tackle the problem.

“To practice an evacuation is very expensive, and again, the city is too poor to bring in buses to do [evacuation] drills, so they just ignore it. We also knew that we had at least thirty thousand poor people, mostly African-American, that did not have access to transportation to leave the city. But like many political decisions, it was viewed as ‘too hard’” (Kiefer, Oct. 19, 2020).

This lack of trust is reciprocal, especially regarding communications of risk. One of the major barriers to making people understand that they need to evacuate or to make their communities resilient is trust. There was a huge lack of trust from the PAD who made up 70% of the population in New Orleans toward their predominantly white city officials. The city also had a bad relationship with its poor PAD citizens when it came to policing, due to perceptions of the police department as corrupt and brutal, which were confirmed days after Katrina during the Danziger Bridge shootings.

“The city’s big focus for 20 years had been crime. The average poor citizen is far more worried about getting shot than they are about a hurricane or disaster. And that’s problematic. The police were largely corrupt, were largely heavy handed, so they didn’t trust the messages that came out” (Kiefer, Oct. 19, 2020).

Traditionally, the PAD community in New Orleans trusted non-profit organizations more than they trusted the city government. Non-profit organizations usually fill in the services that the city could not afford in the face of emergency or disaster. Unfortunately, non-profit organizations in New Orleans felt very marginalized by city administrators before Katrina. They felt they weren’t included in emergency planning (Kiefer, Oct. 19, 2020).

The 'bottom-up' approach of US disaster response & relief system

The Disaster Relief Act of 1950 allowed state governments to petition the federal government for assistance, but assistance was not necessarily automatic or guaranteed (Rivera and Miller, 2006). Additionally, the federal government passed the Civil Defense Act of 1950, which, together with the Disaster Relief Act, allowed the federal government to contribute to the replacement and repair of local damaged infrastructure, but not to private citizens (Comerio, 1998; Rivera & Miller, 2006).

The passage of these acts did little to aid PAD because the federal government left relief and federal funding placement in the hands of local governmental units that often held racist sentiments. This continues to place PAD communities at a disadvantage to white counterparts, thus perpetuating social vulnerability among respective PAD communities (Rivera and Miller, 2007).

The legislation that was used to deal with Hurricane Katrina also left all mitigation efforts to the local government for implementation and development (Rivera and Miller, 2006). The federal government's tendency to let local governments be responsible left the PAD people of New Orleans and the Gulf Coast at the mercy of the political benevolence of state and city authorities which viewed socially vulnerable communities of the region as not significant enough to warrant mitigation and relief plans (Rivera and Miller, 2007).

Kiefer and Rivera also highlight the political problem with the state's disbursement of Katrina's emergency aid from the federal government. Kiefer emphasized this flaw in the way the federal government provides assistance and how Louisiana state government disbursed the money. He explained how the state suddenly had a significant influx of money, and it was given to predominantly white state legislators who took care of their own districts whether they had sustained significant damage or not. *"You have the state legislators receiving all this money that they were supposed to redistribute to the poorest people, the most impacted, the African-American community. Instead, money went to Shreveport in Northern Louisiana, to repair traffic lights, to do a lot of things that were not related to the disaster"* (Kiefer, Oct. 19, 2020).

Rivera cited the disaster relief system from the federal government, down to state and district/city governments, implies certain bureaucratic thought and *laissez-faire* type of actions. This overall system contributed to the violation of human rights of PAD after Katrina. *"I will be careful to say that there is a deliberate violation of human rights. But I would say that their, in some cases, incompetence at the federal level would contribute to the violation of human rights from a macro level"* (Rivera, Oct. 6, 2020)

5.1.6 Solutions

Federal reaction to Hurricane Katrina has pushed disaster relief into a third historical stage that places mitigation in the hands of the Department of Homeland Security. This change hopes to centralize relief and mitigation authority, making relief coordination more efficient (Bush, 2005). With the centralization of authority, the issue of social vulnerability among the

PAD community will be directly tied to federal policy; if PAD or other ethnic groups are left vulnerable to disaster, not only are local government authorities responsible for their disadvantages, but the federal government also becomes responsible for allowing this vulnerability to take place. (Rivera and Miller, 2007)

Kiefer explained how the US government to date still has the mindset of distributing disaster assistance in an equal manner, with an equal amount to each applicant, rather than focus on needs or on results. Moving forward, the government needs to make extra efforts for the most vulnerable populations to get priority assistance, not just distributing money to the states, but imposing targeted restrictions on where this money can be used. The long term best plan would be to distribute disaster assistance from the federal government through a lens of social equity. *“How do we make sure that we get not just equal distribution, but a results-oriented way? That should be guided by the theory of social capital. How do we boost social capital? Because no matter where you look for a disaster, those neighborhoods with the most social capital are the neighborhoods that will recover”* (Kiefer, Oct. 19, 2020).

Both Kiefer and Rivera also highlighted the need for fundamental reform of FEMA’s hiring and recruitment practices. FEMA as an organization and their subcontractors working in emergency management are not very racially diverse. The way they interact with the public reflects institutional racism. A number of victims, not only in the aftermath of Katrina but also Hurricane Sandy in 2012, complained about discriminatory practices because of encounters with FEMA employees or subcontractors who expressed little sympathy for their situations, and also did not look like them (Rivera, Oct. 6, 2020). Katrina was also a wake up call for emergency managers that they need to build trust in their various diverse communities, especially due to high inequality and polarization between the rich and poor in New Orleans (Kiefer, Oct. 19, 2020).

“When I used to research in Black neighborhoods, I would hire African-American graduate students from the local Black university, because they immediately had the trust, they immediately had that rapport. So, that’s one lesson we need to learn. We need to have people that come from and are familiar with the communities that they serve because that affects risk communication” (Kiefer, Oct. 19, 2020).

Trust can be fostered among the PAD community but only through active measures. Breaking the hardened cycle of poverty and despair is a major challenge in the post-disaster recovery effort. The future confidence and trust in government will depend on local people with the help of supportive federal and state governments. (Berke & Campanella, 2006, p. 201). As concluded by Kiefer in our interview, *“you cannot have one-way communications where you’re telling the citizens what to do. The citizens have to see that you’re taking care of them as well”* (Kiefer, Oct. 19, 2020).

5.2 Case study: the Floods in Esmeraldas, Ecuador

5.2.1 National and Regional Context

People of African descent in Ecuador

OHCHR's Working Group of Experts on People of African Descent visited Ecuador at the end of 2019 to report on the situation of Afro-Ecuadorians, who make up about 7.2% of the Ecuadorian population, corresponding to more than a million people. Despite accounting for less than a tenth of the country's population, Afro-descendants make up 40% of the population living in poverty. In the region of Esmeraldas, a coastal region near the border with Colombia, close to 70% of the population is of African descent, and 84.6% of residents live under the poverty line, while only 23% have access to basic services (OHCHR, 2019). In our interview with Victoria Salinas, an anthropologist with a PhD in demography, she strongly underlined the lack of access to basic health services, education, and labor. She emphasized that these conditions were to be blamed on the lack of presence of the state in this rural region. (Salinas, Oct. 2, 2020). This was echoed by another interviewee, Isabel Padilla. Isabel is the coordinator for a social ministry office that works with communities in the rural areas of Esmeraldas. Like Salinas, she described a lack of access to opportunities and basic services, and expressed the opinion that the government had abandoned afro-descendant populations in rural Esmeraldas (Padilla, Oct. 23, 2020).

History of Afro-Ecuadorians

The history of Afro-Ecuadorians goes back to the slave trade. Our interviewee Byron Real, a lawyer and anthropologist, highlighted that from this period and from colonialism, Ecuadorians inherited a system of hierarchical value attributed to certain ethnic groups over others, which is the historical grounding for present-day discrimination (Real, Oct. 15, 2020). Despite the abolition of slavery in 1822, descendants of those who were once enslaved have continued to live in a socio-economic system that is prejudiced against them, as the aforementioned statistics illustrate. Real (Oct. 15, 2020) notably underlines that Afro-Ecuadorians suffer from economic discrimination: despite their integration in the capitalist system, they are still the ones taking on all the disadvantages of the system as if they were still at the fringe of it. A report by the Rapoport Center (2009) underlines the structural nature of the discrimination shaping Afro-Ecuadorians' experiences, something that the Ecuadorian government itself has acknowledged in 2007. Even after the abolition of slavery, notions such as that of *mestizaje* (i.e. the "whitening" and assimilation of the non-white populations through their intermarriage with white people) have continued to shape perceptions, prejudices and opportunities in the country (The Rapoport Delegation on Afro-Ecuadorian Land Rights, 2009).

On a legal level, it took until 1998 and the rewriting of the Ecuadorian constitution for Afro-Ecuadorians to be acknowledged as a distinct ethnic group (Minority Rights Group International, 2020). Despite this acknowledgement, Salinas (Oct. 2, 2020) denounced a lack of recognition of afro-descendant populations as citizens in their own right, which is preventing them from fulfilling their basic needs. Instead, for Salinas, Afro-Ecuadorians are still considered mainly as "*mano de obra*", as unskilled labor force.

This history of slavery and historical discrimination is profoundly entangled with the question of land. A 2009 report also illustrates the difficulties Afro-descendants face in claiming their right to land. Esmeraldas is considered a historic homeland by many Afro-Ecuadorians, as freed and escaped slaves established themselves there as early as the 1540s. Yet today, the population's territories are being destroyed by intensive logging and shrimp farming, while also facing different forms of violence (The Rapoport Delegation on Afro-Ecuadorian Land Rights, 2009). The question of land goes beyond purely territorial concerns: as Padilla (Oct. 23, 2020)

highlighted in her interview, Esmeraldas was a “*palenque*”, a community of freed and escaped slaves, with afro-descendent people coming in from various regions of Latin America over time. As such, the territory was not just land but a space for recreating the cultures they had been torn away from. The discussion around land is therefore tied up with questions of culture and heritage, as these are ancestral territories.

Economic situation of Afro-Ecuadorians in Esmeraldas

In a very detailed study, Dixon (1997) explores in great depth the history of Afro-Ecuadorians and the various forms of discrimination experienced throughout that history. Dixon (1997) also details the history of Esmeraldas: until the 19th century, it was commonly known as the “land of freedom” amongst black Ecuadorians. In the 20th century, however, Esmeraldas was extremely poor – even though it had important natural resources, they were being exploited by wealthy outsiders while the local population saw no benefit (p. 143). Rather, the local population was excluded from economic participation in the new industries establishing themselves in the resource-rich region, attracting workers from all the country. The massive influx of people prevented many from actually finding a job - settlements sprouted up on abandoned plots in the city of Esmeraldas, and the population of the region increased without being followed by infrastructural improvements. In the process, the local, afro-descendant population was relegated to the background, prevented from reaping the benefits of the changes in their region (Dixon, 1997).

The history of these industries not only shows a pattern of systemic forces shaping the Afro-descendant population’s situation in the region - it is also intricately linked with environmental destruction. Indeed, Dixon (1997) also underlines that the oil refinery mentioned above dumps its toxic chemicals into the rivers, upstream of the city’s most disadvantaged areas - bringing them contaminated water. Furthermore, after the kick-off of the oil industry, shrimp farming also made an entrance on the Esmeraldan scene, further depleting the resources upon which the farmers’ survival depended.

What Dixon (1997) shows is that there has been a systemic relegation of Afro-Ecuadorians to the lowest sectors of society and the economy, through a process of modernization that allowed outsiders to make a fortune from the region while its inhabitants were not allowed to benefit from any of it. He also discusses how the sudden flock of non-afro-descendant populations coming into the region resulted in the creation of racial tensions and the upholding and reinforcement of a stratified racial order. This order then contributes to blocking the way of Afro-Ecuadorians to greater economic power, ever-widening the gap between those who have and those who do not.

Dixon’s analysis was echoed in our interviews. Our fourth interviewee, Julianne Hazelwood, a human geographer, underlined the status of the region of Esmeraldas as a “sacrifice zone” - a place whose history is constituted of layer upon layer of violence, compounded by a state attitude of looking the other way, allowing various interest groups to do what they want with the region. She insisted on the ongoing nature of these struggles, and described the place as undergoing a form of long-lasting disaster (Hazelwood, Nov. 1, 2020). Padilla (Oct. 23, 2020) denounced the monopolization of Esmeraldas’ natural resources by extractive industries, from timber to gold. She highlighted the poisoning of the rivers that results from mining activity, killing the fish and causing skin diseases in the population. She implied that these industries arrived and infested the region without taking into account the needs of the local population,

which was excluded from the benefits of the exploitation of its own resources, and now bears the brunt of the negative environmental consequences. This sentiment was echoed by the other interviewees. Salinas (Oct. 2, 2020) also highlighted that the state only took interest in developing Esmeraldas when they realized that there were resources to be exploited there. Her words were echoed by Hazelwood (Nov. 1, 2020), who said that the implementation of these various industries had “all been on the backs of the people and outside of the purview of the official documentation of Ecuadorian history”.

These insights from our interviews confirm Dixon’s (1997) conclusion: interest in Esmeraldas arose not from a will to help its people improve their living standards, but from the fact that the state and large corporations saw an opportunity for profit. The extractivist exploitation of the region’s natural resources has resulted in environmental damage of which the poorest, most vulnerable communities - mostly Afro-Ecuadorians - bear the brunt, all the while not being given the opportunity to better their livelihoods through the exploitation of their own land. The main actors involved in these dynamics are the Ecuadorian state, the big timber, palm oil and mining companies, and the rural local populations. These elements demonstrate the historical and structural discrimination to which Afro-Ecuadorians in Esmeraldas are exposed. As the next section will illustrate, this environmental damage not only raises questions of environmental racism, it also feeds into increased vulnerability to climate change.

5.2.2 Case Study Description

Climate change is expected to have important impacts on both the region and the city of Esmeraldas. In particular, the city is expected to be exposed to more frequent floods - which are commonly called “natural” disasters, yet whose occurrence is made more frequent and acute by anthropogenic climate change (United Nations Human Settlements Programme, 2010). Since this report was published, the region of Esmeraldas has been the site of quite a few of these “natural” disasters. In 2016, significant floods destroyed houses, damaged transport infrastructure, and caused major losses for smallholder farmers (Masoero, 2016). The most recent incident happened in May 2020, when torrential rains made the rivers flood and caused landslides, which cost local families five hectares of cocoa plantations (Luis Freire, 2020). Based on these increasingly frequent and intense disasters linked to climate change, this case study digs deeper into the consequences of these floods for Afro-Ecuadorians, and in particular their human rights.

A study by Salinas et al. (2019) explores these floods in great detail. It finds that the floods are hard to anticipate and prepare for. It also underlines that the floods not only have immediate effects of damage to material possessions or, in more drastic cases, displacement – they can also threaten longer term food security, as subsistence farmers’ crops and livestock also fall victim to the waters. Additionally, analysis of climate adaptation policies reveals that discrimination against afro-descendant communities is manifested through less support, fewer opportunities to participate in decision-making and forced displacement as part of government coordinated relocation. Indeed, the interviews show that the communities’ preferred protection mechanism would be a reforestation scheme, as the trees and their roots would provide some protection from the flooding, yet the government has decided to handle it in another manner. This raises important questions regarding the right of participation of the communities’ members.

Salinas et al. (2019) point to the importance of social and economic elements in generating the vulnerability of these communities: because of their poor living situations, located in high-risk sectors; because of their reliance on the subsistence economy to survive; because of the lack of infrastructure to protect them; the Afro-Ecuadorians of Esmeraldas are extremely vulnerable to climate change related disasters.

This study by Salinas et al. (2019) builds on the groundwork of another study by Salinas (2013). In that study, she notably underlines that the places where afro-descendant communities live (on the rivers' banks and low-lying areas) have been shaped and legitimized by society and its history, as well as by social discourses that tie the communities to these places (Salinas, 2013, p. 129). One other important aspect that Salinas (2013) picks up on in her discussion is the role of the state in its response to floods and vulnerability - she illustrates that the response is not adapted to the realities and perceptions of the communities, but is rather legitimized through mechanisms of authority and repression. This in turn impairs the communities' resilience capacities, as the institutionalized rhetoric and methods employed do not match their needs (Salinas, 2013, p. 130).

Beyond the research work done by Salinas (2013, 2019), our interviews yielded additional insights on these cases of floods. Real and Padilla (Oct. 15/Oct. 23, 2020) both highlighted the role the extractive industries have played in making Esmeraldas more vulnerable to the floods. For example, Real mentioned that because of deforestation, the water of the rivers carries huge amounts of soil that is deposited in the mouth of the rivers, which makes flooding more likely. Padilla also pointed to the fact that the successive exploitation of land for timber, palm oil and now mining have all contributed to making the soil and land more vulnerable to inundation.

As a consequence of climate change, floods in the region and city of Esmeraldas have become more frequent and more intense. This is only exacerbated by the environmental damage caused to the region by extractive industries over the past decades. These floods have disastrous consequences for the Afro-Ecuadorian communities that live in the most vulnerable areas and already lack access to a number of basic services. In the next section, we will use our interview findings to break down how the different rights of PAD are being affected by these floods.

5.2.3 Rights Affected

Right to health

The floods in Esmeraldas are affecting Afro-Ecuadorians' right to health though direct impacts on their physical health and safety, but Salinas (Oct. 2, 2020) also highlighted that there is a lack of medical response to these floods, which limits the right to health and has consequences for Afro-Ecuadorians' ability to work or go to school. This situation should also be understood against the backdrop of an already existing lack of access to basic health services, which both Salinas and Padilla (Oct. 2/Oct. 23, 2020) have highlighted in their interviews. This reflects both an increased vulnerability and a disproportionate exposure to the adverse health effects of the floods.

Right to adequate housing

The floods destroy houses particularly in the riskiest neighborhoods. Real (Oct. 15, 2020) explained that Afro-Ecuadorians often end up living in these neighborhoods because they are poor, and thus can only afford housing in the highly exposed neighborhoods on the banks of the river. Here, we see how Afro-Ecuadorians' marginalized economic status is pushing them towards riskier areas, where their right to safe housing is threatened by the floods. We can state that because of this historical and structural form of discrimination, Afro-Ecuadorians are being disproportionately exposed to the consequences of the floods on their living situations.

Salinas (Oct. 2, 2020) also asserted that the relocation policies proposed by the state were inadequate, as they proposed new housing that could not accommodate the large households the Afro-Ecuadorian families are accustomed to living in. The "solution" offered by the state disregarded the actual needs of the community. Furthermore, the floods drive some people to move; leading to a situation our interviewees have agreed could be labeled one of climate refugees - as Salinas (Oct. 2, 2020) pointed out, this doesn't necessarily mean international, but also internal migration: people are driven away from their homes by the floods. Real (Oct. 15, 2020) underlines that this migration would not necessarily be problematic if people were to migrate with the same opportunities, but Afro-Ecuadorians moving as a result of the floods are migrating with huge inequalities. Even if they only move to another neighborhood in the same city, they have lost everything in the floods, and thus will be additionally vulnerable no matter where they settle next, Real said. We thus can see that climate change is threatening the right to housing of Afro-Ecuadorians in Esmeraldas by making their neighborhoods increasingly unsafe to live in, and by driving them on forced migration journeys.

Right to land

The question of forced migration is entangled with that of the right to land. Real (Oct. 15, 2020) pointed out that we should understand migration also as the forced separation of the people from their land. Salinas (Oct. 2, 2020) underlined that as the lands of Afro-Ecuadorians are flooded, they have no choice but to move in quest of new employment opportunities, as they are living off their lands and have limited access to other opportunities in Esmeraldas. Afro-Ecuadorians lose access to their land as a result of climate change, and are therefore driven away from their ancestral territories in quest for subsistence.

Right to food

In her interview, Salinas (Oct. 2, 2020) underlined the very direct connection between Afro-Ecuadorians' land and their food security. These populations, she said, are populations of "*auto-subsistencia*" - they rely on their own food production for survival. As the floods inundate their lands, they are directly impacting their ability to put food on the table, not only immediately, but in the longer run: when the floods destroy the crops, it endangers food security for the coming year(s).

Right to culture

The rights to land and housing discussed above are intimately linked to the right to culture. As mentioned in the background section, Esmeraldas is an ancestral territory for Afro-

Ecuadorians; Padilla (Oct. 23, 2020) describes the land as a space to create and recreate culture. People living on the lands are historical guardians of their territories, but also of their traditions. This is echoed by Salinas (Oct. 2, 2020), who also underlined the importance of the cultural dimensions of spaces. Thus, by driving people to move away from their homes, climate change is not only uprooting them from a safe house, but is also threatening their right to culture. This is reflected in statements made both by Salinas and Padilla (Oct. 2/Oct. 23, 2020), who highlighted the reluctance of people to move despite the risks of their neighborhoods. Padilla suggested that some Afro-Ecuadorians would rather die in their own territories where they have spent their whole lives, because the costs (not only material, but emotional and cultural) of moving are too high. Salinas used similar terms: *“solo muertos se van a mover y a salir de su tierra”* - they will only leave their land dead. In her interview as well as in her studies (Salinas et al., 2020), she highlights that when the state is proposing relocation as a solution for the floods, it is disregarding Afro-Ecuadorians’ right to culture and their attachment to the land beyond the aggravated risks posed by climate change.

Right to participation and information

The right to participation of PAD is particularly affected in the response to the floods, as the study by Salinas et al. (2019) has highlighted. She underlined it in stark terms in her interview: *“el nivel de participación de la población es nulo; [...] no hay información, no hay socialización, no hay participación, no hay comunicación básica entre el estado y entre la poblaciones”* (“the level of participation of the population is zero; [...] there is no information, there is no education, there is no participation, there is no basic communication between the state and the people”). According to her, the state is proposing mitigation and adaptation measures such as relocation that do not correspond to the realities of the people. She also denounces the pretense of participation that the state puts on, saying that the people were informed because they held an information session once. This, Salinas underlines, is not a proper dialogue. Padilla (Oct. 23, 2020) also underlined the need for knowledge and the obstacles that a lack of quality education are posing to the participation of PAD. Here, we see how the floods give rise to a state response that in many ways denies Afro-Ecuadorians their right to participation. This reflects an imbalance of power.

As this section has illustrated, the floods in Esmeraldas threaten numerous rights of PAD in the region. These rights are entangled - they overlap and intersect. This was highlighted by Real (Oct. 15, 2020), who in his interview argued for a more holistic approach to the question of rights, rather than considering them only one at a time.

5.2.4 Evidence of Racial Discrimination

One of the goals of this case study was to connect the dots between racial discrimination, climate vulnerability, and the rights of Afro-Ecuadorians. Our interviewees all underlined the role of economic and social discrimination in producing the situations that put PAD at particular risk from climate change. Real (Oct. 15, 2020), for example, explained the marginalization of Afro-Ecuadorians within the capitalist system that was brought to Esmeraldas through the extractive industries: despite them having been integrated in the system over the last decades, they continue to take on most of the disadvantages, as if they were still at the margin. He also highlighted that poor people - of which Afro-Ecuadorians are an overwhelming majority, as mentioned earlier - have to live in whatever area they can afford, which often happens to be

areas that are risky. In the city of Esmeraldas, they settle on the banks of the river, the spot that is most vulnerable to the floods. This is a clear example of a form of discrimination that is both structural and historical. It keeps Afro-Ecuadorians in poverty, thus driving them to remain in risk areas and making them more vulnerable to climate change impacts.

Salinas and Padilla (Oct. 5/Oct. 23, 2020) both explained that the lack of interest that the state takes in this enhanced vulnerability is a consequence of discrimination. Padilla said:

“Te lo voy a decir yo: esa falta de tomar de atención a los pueblos se llama racismo, se llama discriminación, se llama exclusión; qué unos tienen derechos y otros no.”

“I will tell you what: this lack of attention to the people is called racism, it is called discrimination, it is called exclusion; the fact that some have rights and others do not.”

She underlined that opportunities were denied to Afro-Ecuadorians, especially to young people and to women. This structural lack of opportunities then ripples throughout all areas of their lives, including their vulnerability to the impacts of climate change.

Salinas, similarly, said that the lack of consideration of the state for the needs of Afro-Ecuadorians when designing adaptation policies was due to:

“[...] no necesariamente por ser afro, si no por ser una población que no tiene mucho poder - pero eso si es que por ser afro!”

“[...] not necessarily to them being afro-descendent, but rather to them being a population who doesn't have much power - but this is due to them being afro!”

The notion of power is something that all interviewees mentioned. They described the situation as one where Afro-Ecuadorians hold very little power, which allows the state and big corporations to ignore their needs. Real (Oct. 15, 2020) described a weighing of interests by the Ecuadorian state, saying that they often favor the interests of those living in the capital over the interests of a few rural families in Esmeraldas. These power imbalances coupled with historical neglect result in discrimination that is exposing Afro-Ecuadorians to bear the brunt of the floods in Esmeraldas, threatening a number of their fundamental rights.

The results of our interviews clearly point to the existence of indirect discrimination that is profoundly rooted in the country's very functioning. This implies that understanding the disproportionate impacts of climate change cannot happen in a vacuum; rather, the effects of historical discriminations are now being compounded by the new challenges posed by climate change. Hazelwood (Nov. 1, 2020) mentions that she thinks of it as a “triple wave”: the colonization period, the effects of climate change, and climate change mitigation development - these three waves, rather than happening separately, crash into one another and “coalesce to become one giant disaster”. This also falls in line with the idea that racial discrimination cannot be neatly compartmented, but rather tends to spill over from one area of life to the other.

5.2.5 Other Key Insights

Some of the key insights that emerge from this case study are the interconnections between previous environmental damage and current climate change impacts: through our interviews,

we have seen a story unfolding that ties the exploitative industries of the past decades to the current outcomes of the floods. The link is drawn not only by the fact that the damage caused to land - notably through deforestation - makes it more vulnerable to flooding, but also because the discrimination perpetrated by the industries (with Afro-Ecuadorians of the region being excluded from the benefits of their land's exploitation while bearing the brunt of the consequences of environmental damage) is further exacerbated by the impacts of climate change. Here, we see how environmental racism is taken to new dimensions as climate change worsens, reflecting the transition that needs to be operated from environmental to climate justice.

Another key insight is the importance of the historical roots of discrimination. Indeed, it appears that climate change comes in as an additional factor that is laid over an already existing and complex entanglement of historical, economic and social discrimination. As such, the floods in Esmeraldas - and climate change more broadly - complicate and exacerbate inequalities that already exist and are woven in the fabric of society. As our interviewees have pointed out, this is a structural issue of discrimination. The impacts of climate change therefore cannot be interpreted solely as new outcomes, but need to be considered as the next chapter of a story that has been centuries in the making. Only by taking these various layers into account can we take full measure of the disproportionate impact of climate change on the rights of PAD.

An interesting element briefly evoked by Real (Oct. 15, 2020) that would deserve deeper examination is the question of slow-onset disasters. Indeed, he explained how in the North of the city of Esmeraldas, some houses are getting slowly damaged by explosions in the mountains (it is unclear whether these are due to climate change). This reminds us that disasters do not need to be sudden like floods, but can also happen slowly over a long period of time, ultimately also leading to people having to move.

Finally, the phenomena observed in this case study are not limited to Esmeraldas, but point at patterns that prevail in other rural communities across Latin America. For example, Salinas (Oct. 2, 2020) emphasised the enhanced vulnerability of rural communities because of the direct connection between their livelihoods and their land; not only in Esmeraldas but across all of Latin America.

5.2.6 Solutions

There are only a few solutions that emerged from our conversations with experts. With regard to participation and the right to culture, Salinas (Oct. 2, 2020) highlighted the need for the state to better take into account the lived realities of Afro-Ecuadorians in Esmeraldas when trying to design policies responding to the floods. More continuous communication processes, for example, would be a way to try to address the floods without neglecting the needs and voices of the local population. In the same vein, Padilla (Oct. 23, 2020) also highlighted the need for better education and improving knowledge. She also called for the empowerment of afro-descendant communities: the opportunity to learn about their history and to develop self-love; access to work and education opportunities; and access to greater political power. The notion of empowerment appears particularly crucial as the question of power appears to be central to the creation of situations where Afro-Ecuadorians are particularly vulnerable to the impacts of climate change. This idea of empowerment was echoed by Hazelwood (Nov. 1, 2020): she contrasted the situation of Afro-Ecuadorians with that of indigenous populations in the country.

The two are facing similar struggles, and their destinies are profoundly interlinked. However, she mentioned that the indigenous populations of Ecuador were able to gain some form of protection through their being recognized as a nationality. This, she argued, allowed them to become organized on a national level, and thus to be able to refer to organized forms of support when their rights are being violated. If Afro-Ecuadorians were to have a similar organization, it wouldn't stop the violence they're facing, but it might amplify their voices and make for better representation.

These solutions suggest that the problem needs to be addressed on a structural level: a deep transformation appears necessary in the economic and social treatment of Afro-Ecuadorians in order for their rights to be better protected from the impacts of climate change.

5.3 Case Study: the Cap-and-Trade System in California

5.3.1 National and Regional Context

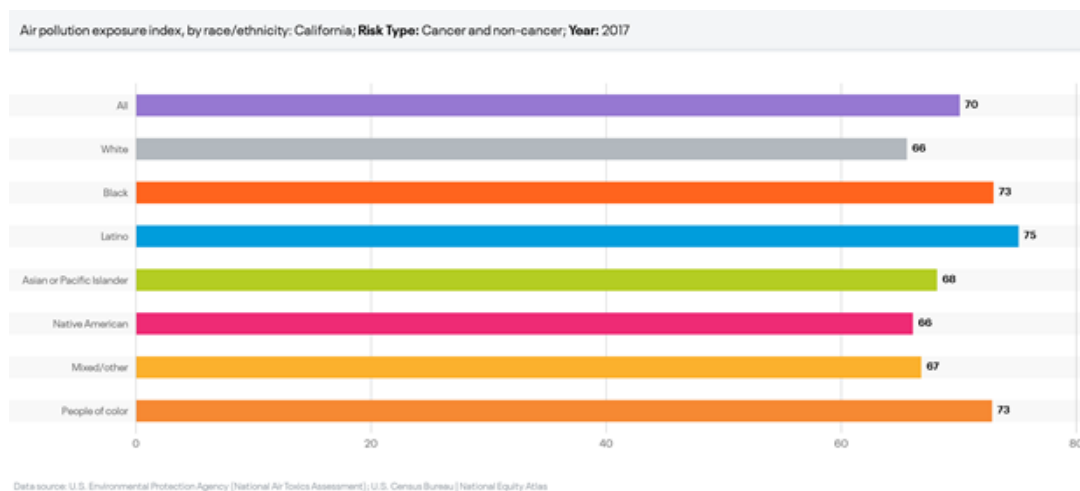
Who are People of African-descent in California?

In this case study, PAD can have different toponyms. We used the terms "Black people", "Black communities" and "African American" as synonyms to identify PAD. Moreover, we refer to "people of color", which includes PAD, among other racial groups. The use of this broad term is a consequence of the currently limited research conducted on the impacts of the cap-and-trade system on specific communities. Indeed, researchers so far have tended to study climate policies through the lens of environmental justice, which encompasses low-income communities and communities of color in general.

According to the U.S. Census Bureau, Black or African American people in California account for 6.5% of the State population, which represents more than 2.5 million people. In this category, a Black person is someone who self-identifies as "a person having origins in any of the Black racial groups of Africa". For instance, this includes people who indicated being African American, Kenyan, Nigerian, or Haitian (U.S. Census Bureau, 2020). The definition thus encompasses both recent immigrants and people who historically moved to the U.S. mostly due to slavery.

The Disparity of Hazardous Co-Pollutants

In California, as in other US states, there is a disparity in exposure to co-pollutants for people of color, including Black communities. Co-pollutants are air toxics and particulate matter emitted at the same time as greenhouse gases (GHG) from the result of industrial activities or transportation (Cushing et al., 2018). According to the National Equity Atlas' air pollution exposure index, 73% of Black people are exposed to air pollution, slightly behind Latinos (75%), but higher than for White people (66%). On the national level, the disparity is even wider; the index is 19 points higher for Black people than for White people. As presented in the section on climate change and racial discrimination in North America, historical discrimination has been largely caused by racist ideologies. Similar reasons can explain the proximity of PAD to sources of air pollution. According to the National Equity Atlas, the ongoing disparity is "largely caused by (...) practices such as racially exclusive housing covenants and zoning laws as well as ongoing ones such as discriminatory hiring and mortgage lending." As a consequence, people of color have struggled economically and politically (National Equity Atlas, 2020).



Reference: <https://nationalequityatlas.org/>

The Historical Background of Climate Laws and Policies in California

In 2006, California passed Assembly Bill 32 (AB 32), which aims to reduce GHG emissions to 1990 levels by 2020 by adopting regulations. Under this bill, the choice of the mitigation mechanism was delegated to the California Air Resources Board (CARB), a state agency whose purpose is "protecting the public from the harmful effects of air pollution and developing programs and actions to fight climate change" (California Air Resources Board, 2018). The legislation itself is groundbreaking as it was the first major climate change policy to pass in the country. During the drafting of AB 32, environmental justice organizations - which by that time were recognized as important actors in climate politics in California - were actively negotiating some elements of the text. Such groups were mainly concerned that a cap-and-trade system would be specified as the preferred market mechanism in the bill. They feared that localized pollutants would increase under the system (Sze et al., 2009).

Madeline Wander, an environmental justice researcher and urban planning doctoral student, mentioned in her interview that environmental justice advocates were convinced that major polluters, especially oil and gas giants, would continue emitting using the carbon trade

mechanisms to do so. As a result, communities of people of color living near polluting facilities would be unlikely to see any benefits from the system. On the other side, emitting industries were pushing for the inclusion of the cap-and-trade system as the chosen mechanism in the bill as they saw it as more business-friendly. Mainstream environmental organizations such as the Sierra Club were also supportive of this specific market mechanism. So was the State Governor, Arnold Schwarzenegger (M. Wander, personal communication, October 2020). In the end, the State legislature respected the environmental justice concerns and did not specify the cap and trade system as the preferred market mechanism in AB 32 (Sze et al., 2009). However, it did not prevent CARB from implementing the program in 2013 as the principal scheme to reduce CO₂ emissions in the State (California Air Resources Board, 2020)

5.3.2 Case Study Description

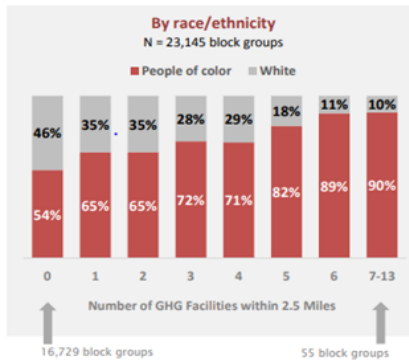
The Flaws of the Cap-and-Trade System

The cap-and-trade system in California sets an annual cap on overall greenhouse gas emissions. In 2016, a modified version of the law set the goal of reducing emission to 40 % below 1990 levels by 2030. To achieve this, the state limits how much GHG companies can emit every year by giving allowances. The companies that emit less than their annual limit can sell the extra allowances to other companies, which is a financial incentive for the private sector to reduce its carbon footprint. This mechanism should help reduce emissions of GHG that have global effects, like carbon dioxide and methane. Necessarily, since GHG and co-pollutants are usually emitted simultaneously, a GHG emissions reduction would also decrease co-pollutants on the State level. However, on a local level, co-pollutants are not regulated under the cap-and-trade system (Mock, 2016).

Instead, co-pollutants are regulated under another bill: Assembly Bill 617. For Gladys Limòn, Executive Director of the California Environmental Justice Alliance, this approach creates a legal fiction. To regulate co-pollutants and GHG emissions under two separate bills is nonsense since they are “emitted from the same tailpipe” (G. Limon, personal communication, November 2020). Moreover, according to Martha Dina Arguello, Executive Director of Physicians for Social Responsibility Los Angeles, the regulatory authority provided by this bill is weak. Companies have no legal obligations to reduce local pollution but receive financial incentives if they do (M. D. Arguello, personal communication, November 2020).

Evidence suggests that the concerns of environmental justice organizations were ultimately justified. Indeed, because the biggest polluters are mostly located close to communities of people of color, they are the ones living with the consequences of pollution hotspots. On average, the neighborhoods located within 2.5 miles from a facility that emits localized air pollution have in proportion 22% more residents of color than neighborhoods located further. These neighborhoods are also among the worst in terms of social and environmental stressors

to health (Cushing et al., 2016). Because of this geographic proximity with polluting facilities, communities of color are disproportionately affected by air pollution.



People of color are more likely to live within 2.5 miles from facilities emitting localized pollutants than white people (Cushing et al., 2016).

Pollution Hotspots Around Communities of Color

In practice, the cap-and-trade policy does not protect PAD from localized pollutant emissions. A research from 2016 showed that under the carbon market, GHG emissions from facilities located in environmental justice communities (i.e. communities of color and low-income communities) have increased in some cases, despite their overall decline in the state (Cushing et al., 2016). These communities are disproportionately impacted by the state’s worst polluters, which have increased localized air pollutants under the cap-and-trade system. The causality link seems obvious since the polluting facilities regulated by the program are “disproportionately located in economically disadvantaged neighborhoods with higher proportions of residents of color” (Cushing et al., 2018).

Another major flaw in the program that allows polluters to avoid localized emissions reductions is the offset credit. As a result of this feature, polluting firms can choose between buying allowances or offset credits to comply with the GHG cap. These compliance instruments are sold and bought on the carbon market, which is regulated by the emission cap established by the law. Ethan Elkind, Director of the Climate Program for the Center for Law, Energy & the Environment at UC Berkeley, mentions one of the problems with offsets is that local pollution is not reduced (E. Elkind, personal communication, November 2020).

Since the implementation of the cap-and-trade system, most participating companies did not use offset credits to compensate for their emissions. However, the biggest polluters in the state of California did: “The top 10 users of offsets account for 36 % of the total covered emissions and 65 percent of the offsets used”. Most of them are oil and gas companies, such as Chevron, Shell, and Valero (Cushing et al., 2016). A famous example is the Chevron refinery in Richmond, California. This huge facility, which can process up to 240,000 barrels of crude oil every day, is located close to a neighborhood mostly composed of Black people (Kay & Katz, 2012). According to Wander, “the Chevron refinery in Richmond expanded under cap-and-trade” (M. Wander, personal communication, October 2020). By using the offset mechanism, Chevron has been able to continue its industrial activities without reducing local emissions, while complying with the California climate law. The carbon trading program is thus responsible for this loophole.

5.3.3 Rights Affected

Right to health

The right to health of people of African descent is directly threatened by the proximity of polluting facilities. Tens of thousands of illnesses are caused by air pollution in California, and people of color see their health particularly threatened. For instance, the cities with the highest concentration of smog in the state are also the ones with the most important densities of people of color and low-income residents. The same groups in these urban areas are also more vulnerable to the health consequences of air pollution because they lack health insurance. This leads to heavier health impacts from air pollution compared to people who have health insurance (Morello-Frosch et al., 2009).

According to Gladys Limon, the health problems of communities living around the Chevron refinery in Richmond, California, are a striking example of the right to health's violation. Communities of color have respiratory problems which are directly correlated with the facility's emission. The air pollution is a "daily assault on people's welfare" (G. Limon, personal communication, November 2020). Another example to illustrate the violation to the right to health is the cumulative effects of air pollution. Various contaminants can drive illnesses such as asthma, but also heart disease and diabetes. The polluting sources are multiple (traffic, indoor air pollution, dry cleaners, etc.). Nevertheless, emissions from polluting facilities, which are regulated under the cap-and-trade system, are also part of this "toxic soup of cumulative impacts" (M. D. Arguello, personal communication, November 2020). In sum, the cap-and-trade system does not protect communities of color that are exposed to polluting industrial activities that have direct negative health impacts due to particulate matter emissions. PAD in California thus see their fundamental entitlements to standard of living, wellbeing, and access to a health system violated.

Right to life

The study by Morello-Frosch et al. (2009) also found that air pollution caused more than 18,000 premature deaths in California per year and that, as for the illnesses caused by pollution, people of color are disproportionately represented. This overrepresentation of people of color, including African Americans, in the exposure to air pollution, leads to higher risks of cancer and heart disease, among other health consequences (Clark et al., 2014). The reduction of life expectancy of people of color, including children, due to air pollution has also been noted in certain neighborhoods of Los Angeles, for instance (M. D. Arguello, personal communication, November 2020).

Right to participate in public affairs

As seen in the previous sections, the environmental justice movement in California has been politically active and part of the discussions that led to the AB 32. These organizations have even successfully institutionalized an environmental justice advisory committee to allow the participation of the movement in the decision-making process under the bill. However, in practice, the committee had no power to decide which regulatory system would be used to achieve the objectives under AB 32 (Sze et al., 2009).

The question of political participation remains subjective. Environmental justice groups have participated in negotiation tables on climate policies in the past. The movement has also

achieved legal gains and received financial resources from the state government. Nonetheless, from the movement's perspective, their political influence remains limited compared to other groups such as the oil and gas industry. While the situation is imperfect as flaws in the carbon market remain, the right to participate of PAD seems to have been respected by public authorities. Indeed, the state of California has followed some guidelines provided by the article 25 of ICCPR, such as holding consultative processes.

Right to adequate housing

In this case study, the right to adequate housing of PAD is violated. The habitability of housing, which entails the protection against threats to health and structural hazards, is particularly not respected. The daily exposition of PAD to air pollution coming from facilities emitting under the cap-and-trade system is a violation of this entitlement.

5.3.4 Evidence of Racial Discrimination

The Roots of Environmental Racism in California

The current situation where Black communities are disproportionately impacted by local pollution has its roots both in the national and regional context of racial discrimination. To better understand the geographic proximity of Black communities with the most polluting facilities in the region, it is thus useful to go back to the history of environmental racism in California.

The environmental justice movement in California emerged in the 1980s, as in the rest of the US, in response to the disproportionate impact of toxic facilities on communities of people of color, including Afro-descendant communities. During our interview with Madeline Wander, she emphasized that an important landmark in the history of the movement was when the Cerrell Report was revealed to the public in 1984 (M. Wander, personal communication, October 2020). This study, written by a consulting firm for the benefit of a waste management company, revealed that the waste industry was identifying sites for polluting facilities based on where it would provoke the least public opposition. Not surprisingly, the firm targeted neighborhoods with lower socioeconomic status, which are deprived of political influence. As exposed in this report, these communities are mainly composed of people of color. Therefore, even though race was not expressly mentioned, the industry was indirectly perpetuating historical discrimination that has been affecting people of color for decades. While it could be argued that this was an isolated incident, the evidence shows that most of the toxic facilities in California, regardless of the type of polluting industry, were and are still located around communities of color (Cole & Foster, 2001).

Corporations not only chose specific areas to install polluting facilities based on political factors, as exposed in the Cerrell Report, but also on other considerations also tied with race for historical reasons. For instance, after the report was released, companies managing toxic facilities in California argued the location of their facilities was based on so-called neutral criteria: the cost of land, geographical features, and population density. Once again, because of the historical discrimination in the United-States, people of color disproportionately live on low-value lands and in low-density areas, exactly where polluting industries install their facilities (Cole & Foster, 2001). In the face of these accusations, the industry replied that

residents of color moved around polluting facilities because of the lower housing cost. This argument was dismissed by a study in early 2000, which confirmed the perpetration of historical racial discrimination (Pastor et al., 2001). Since then, environmental justice organizations have been vigorously seeking fairer treatment from the government and industry.

Institutional Racism

For Martha Dina Arguello, institutions that control climate policies in California are conservative and resistant towards change. Despite years of social activism on environmental justice principles, political actors continue to support the extractive and polluting industries. Moreover, the institutional culture of passive racial discrimination is hard to shift and is continually recreated by the individuals at the head of these institutions (M. D. Arguello, personal communication, November 2020). In that sense, Californian institutions commit state discrimination with their policies and practices that continue to marginalized people at risk, which include PAD.

In sum, the loophole in the cap-and-trade system that allows the worst polluters to continue emitting toxic co-pollutants from their facilities located close to people of color - including PAD - is a form of structural discrimination. In its actual form, the cap-and-trade system does not fix the historical discrimination and is currently causing indirect discrimination. Moreover, while the rights to health, to life, and to adequate housing of PAD - among other communities of color - are threatened by toxic emissions, the carbon market perpetuate human rights violations.

5.3.5 Other Key Insights

International Relevance

The case study is highly relevant for the rest of the world. According to Ethan Elkind, California has been a pioneer in the United States and the world on climate policies by adopting one of the first carbon market programs. For this reason, countries like China are expressing interest in adopting a similar mechanism and consult experts from California to guide them. As more governments will implement climate policies, some of them will choose a cap-and-trade system, especially the one with strong business ecosystems. It is, therefore, crucial that lessons learned from the system in California are learned elsewhere. Disadvantaged and discriminated communities, whether based on race, class, or gender, exist in other countries and could also live near polluting facilities (E. Elkind, personal communication, November 2020). Thus, if not addressed, the flaws in the cap-and-trade system could reproduce or perpetuate discrimination and human rights violations in other regions.

4.3.6 Solutions

While the evidence seems solid to demonstrate the cap-and-trade system's flaws and the consequences on PAD, one could wonder if other policies would have better results. Indeed, while environmental racism issues are real, climate mitigation policies are complex. Before drawing ultimate conclusions, this section will explore alternative measures that could replace or complement the cap-and-trade system.

Carbon Tax

A carbon tax is another recurrent climate policy. Therefore, it is relevant to briefly analyze the potential impact of this measure on the rights of PAD. According to Madeline Wander, a carbon tax would have incentivized companies to reduce their GHG emissions even more. The revenues from a carbon tax would also be higher “especially because right now the cap is way too high.” (M. Wander, personal communication, October 2020). Ethan Elkind agrees the carbon tax would address some equity issues by ensuring every facility would pay a fee for polluting, which could theoretically reduce the emissions (because exchanging allowances and offsetting is not possible). Although, a carbon tax does not fix the co-pollutant problem that is affiliated with the cap-and-trade system, because some businesses could just keep paying their right to pollute. For both mechanisms, the price determines the behavior of industries regarding emissions. The higher the price is set, the less businesses will emit. Ultimately, the outcome of a carbon tax versus a carbon market would be similar if the price of a CO₂ ton is equivalent (E. Elkind, personal communication, November 2020).

Complementary Mechanisms

Adding complementary policies and regulations to the cap-and-trade system could help reduce local pollution around communities of color in California, and elsewhere in the world (Cushing et al., 2018). To reduce pollution hotspots, Farber proposes a range of solutions that “could include creating geographic grading zones, imposing ceilings on emissions (...), or prohibiting certain sources from purchasing allowances” (A. Farber, 2012). Elkind supports a similar approach. A command and control approach, in addition to the cap-and-trade system, would limit pollution hotspots that affect PAD. That is, to regulate the worst polluters in California by setting carbon emission ceilings on a case-by-case basis. In addition, the state could set decarbonization targets for each sector of the economy. It would address the loopholes used by the oil and gas industry to continue to emit under the carbon market. Putting a price on carbon emissions is efficient, but governments should not entirely rely on market mechanisms (E. Elkind, personal communication, November 2020).

Investing in Just Transition Measures

Measures to support a just transition would also help diverting from fossil fuels. Governmental investments should be made to support the conversion of oil workers toward clean energy production. On the other hand, public fundings should stop supporting the fossil fuel industry. These measures would create local employment opportunities while protecting discriminated people (M. D. Arguello, personal communication, November 2020). Ultimately, such policies would reduce GHG and co-pollutant emissions, thus mitigating the harm on PAD.

Investing in Disadvantaged Communities

Reinvesting in disadvantaged communities is a solution to address the historical discrimination that has afflicted them. The California Senate Bill 535 (SB 535), which requires that at least 25% of the revenues from the cap and trade programme have to be invested in disadvantaged communities, seeks to accomplish this objective. Under this bill, communities partly composed

of PAD can receive funds to improve public infrastructure. Madeline Wander argues that SB 535 is a direct gain from a strong environmental justice movement in California: “it completely came from the movement. If it had not been strong in California, nothing like that would have passed.” (M. Wander, personal communication, October 2020). Thus, SB 535 highlights that when the right to participate in public affairs is fulfilled, discriminations can be better addressed. Moreover, the retribution process entailed in the bill is a way to minimize the harms to the communities bearing the burden of pollution. According to Ethan Elkind, there is a strong equity, fairness and moral perspective coming from this bill (E. Elkind, personal communication, November 2020).

5.4 Case study – Biofuel policies in Colombia

5.4.1 National and Regional Context

PAD are denoted by different terms in Colombia, as seen in the demographic census since 2005 which includes ‘black’, ‘mulatto’, Afro-Colombian’ and Afro-descendant’ (Freire et al., 2018). These terms seek to encompass PAD who share unique cultural characteristics. Afro-Colombians live in both rural and urban areas, being present within every major city in the country. A World Bank study estimated the total number of Afro-Colombians at five million in 2015, based on prior census data which indicated they represented just over 10% of the total population (Freire et al., 2018). Certain areas have higher concentrations of PAD, notably the coastal regions where populations are as high as 90 percent and 60 percent on the Pacific and Atlantic coast respectively (Freire et al., 2018).

Afro-Colombians are primarily the legacy of the African slave trade during the sixteenth and seventeenth centuries, which forcibly brought African people to the Americas. Records from the 1800 indicate that nearly 40% of the population were of African descent, of which by then, the majority were freed slaves. However, the abolition of slavery in Colombia did not occur until 1852 (Freire et al., 2018).

Despite over 150 years having passed since the abolition of slavery, its legacy is manifest in Afro-Colombians’ territorial segregation, disproportionate levels of poverty and systemic exclusion in areas such as education, health, and political participation, amongst others. Afro-Colombians are more likely to be living in poverty and twice as likely to reside in slums than non-Afro-descendants (Freire et al., 2018). Systemic discrimination towards Afro-Colombians was also recognised by the Inter-American Court of Human Rights (IACHR, 2009).

Two regions were assessed within this case study - the Choco region found on the western coast of the country with a section along the Caribbean coast, and Maria de Montes, found near the northern coast of Colombia in the Caribbean region. Both of these regions have large Afro-descendant communities who hold collective land rights. These Afro-descendant populations are disproportionately represented amongst the poor. Within the Choco region, where 82% of the population is Afro-Colombian, over 80 percent of the urban population lives in poverty, illiteracy is three times higher than the national average, and there has been severe neglect in the provision of infrastructure, transportation, and basic services (Freire et al., 2018).

One of the recent drivers of poverty in these regions has been the internal conflict within Colombia, which lasted over 60 years. Afro-Colombian communities have been disproportionately affected by this conflict, which undermined opportunities for economic and social development. Estimates suggest over 30% of those displaced by the armed conflict are Afro-Colombians (IACHR, 2009). In 2007, following a visit by the Rapporteur on the Rights of Afro-Descendants and against Racial Discrimination for the Inter-American Commission on Human Rights (IACHR) to this area, three specific areas of concern were identified: “poverty and exclusion of the Afro-Colombian population; the armed conflict and its impact on the Afro-Colombian population; and failure to investigate crimes committed against Afro-Colombians” (IACHR, 2009). As we will see, these issues are deeply interconnected with the expansion of palm oil, the dominant crop for biofuel production within Colombia.

Within Colombia, a notable legal development with regards to the recognition of the rights of Afro-descendant communities was the introduction of Law 70 of 1993, which granted afro-descendant communities “the right to own their collective territory, to maintain their rural-based traditional economies and to develop in ways that were appropriate to their cultural identity and social practices” , as well as certain measures to promote political participation. The territories recognised under the Law are managed by entities called ‘*Consejos Comunitarios*’. This legislation was instrumental for Afro-Colombians in rural areas to be recognised as holding equal cultural and territorial rights as indigenous communities. However, as will be discussed below, there have been ongoing failures to effectively implement this law and this forms part of one of the human rights violations raised by this case study.

5.4.2 Case Study Description

This case study explores the negative impacts on the rights of Afro-Colombians of policies associated with the expansion of palm oil production, a major feedstock for biofuel production in Colombia. According to the European Commission, “biofuels are liquid or gaseous transport fuels such as biodiesel and bioethanol which are made from biomass. They serve as a renewable alternative to fossil fuels...helping to reduce greenhouse gas emissions” (EU Commission, 2020).

The Colombian government has been a supporter of oil palm plantations as a means of economic development since the 1960s, but the boom in production took off in 1998, rising from approximately 400 million tonnes of oil to over 900 million tonnes by 2011 (García & Calderón, 2012). The increase in land for palm oil plantations was even greater, rising from 150 million hectares to 450 million hectares between 1998 and 2012, that is, trebling in 14 years (Castro, 2016).

Supportive state policies accompanied this development, starting in the late 1990s when the Minister of Agriculture, Carlos Murgas, introduced an agricultural development strategy based heavily on expansion of palm oil as a commodity crop (Castro, 2016). According to Nazaret Castro, a journalist who wrote her doctorate on the impacts of biofuel development on communities in Maria de Montes (Oct. 23, 2020), Carlos Murgas was trying to replicate the Malaysian model of palm oil exportation. Policies designed to promote biofuel production started as early as 2001, which set requirements on biodiesel blends in transport fuels

supplied to major cities, initially allowing for ethanol blends. The Law 939 of 2004 was the catalyst for palm-oil based biofuel which subsequently became the dominant biofuel feedstock in Colombia and created the necessary regulation for other sources of biodiesel to feature within the transport fuel mix, and additional subsidies to promote palm oil production for biofuels (García & Calderón, 2012). For instance, the 2004 law exempted new and renewed palm oil plantations from income tax for 10 years from the point at which the plant became productive (Marin Burgos et al., 2011). By 2010, Colombia had established a mandatory blending target of 10% biodiesel in transport fuels applicable across most of the country (García & Calderón, 2012).

Overall, since the early 2000s, the palm oil industry benefited from a supportive policy framework characterised by tax exemptions, price regulation, favourable credit provision and government investment in biofuel production facilities (García & Calderón, 2012) and (Marin Burgos et al., 2011). Burgos, a researcher on land grabs associated with biofuel developments in Colombia, and Castro (Oct. 7 / Oct. 23, 2020) both attest to these measures favouring palm oil production over other crops. As a result, the share of palm oil dedicated for biodiesel production rose from just over 5% to 40% between 2008 and 2011, all of which was consumed domestically (García & Calderón, 2012).

Within Colombia's National Development Plan 2006-2014, biofuel development is associated with the goal of reducing the environmental impact of the combustion of fossil fuels, notably by reducing carbon dioxide emissions ((García & Calderón, 2012). The European Union was a major proponent of this mitigation strategy, as evidenced by the 2009 EC Renewable Energy Directive (RED) which introduced a target that 10% of all transport fuel must come from renewable sources by 2020. This target applied to biofuels drawn from both domestic and foreign production (Levidow, 2013). Burgos and Castro (Oct. 7 / Oct. 23, 2020) both noted this policy decision and its implication of a growing market for biofuels as having an influence on Colombia's agricultural policy framework, although in the end, Colombia's biofuel was not competitive on the global market. Climate change mitigation as a direct and indirect driver interacted with pre-existing forces, which favoured the establishment of an agro-industry based around palm oil production - both by state and non-state actors.

Within Colombia, palm-oil plantations are managed according to agro-industrial production processes, characterised by large monoculture plantations (Marin Burgos et al., 2011). Over 60% of production is found on plantations greater than 200 hectares (García & Calderón, 2012), reflecting the historical inequitable land distribution within Colombia.

Two regions are considered for this case study, to showcase two mechanisms of palm oil expansion that have had and continue to have negative impacts on Afro-Colombian communities:

1. land seizures of collective territories; and
2. creation of exploitative contracts with small-scale Afro-Colombian landholders.

From the 1990s to 2006, both regions experienced major displacements of Afro-Colombian communities because of the conflict in Colombia. During this time, paramilitary forces seized land that was temporarily vacated, and promptly established extensive palm oil plantations as a cash crop which could provide rapid returns. These plantations and the land were

subsequently transferred to newly created palm oil companies - the same that currently operate as vertically integrated biofuel producers (Marin Burgos et al., 2011). Victor Abramovich, professor of human rights law at the University of Buenos Aires and former Commissioner for Inter-American Court of Human Rights (IACHR), (Oct. 23, 2020) also concurred that in many cases, it is suspected that these are the same actors operating under different guises .

The forced displacement of Afro-descendants from collective territories within the Choco region is the most documented of this type of land seizure, and culminated in the arrest of 23 businessmen in 2010 (Castro, 2016). Their activities were expressly linked to collaboration between the paramilitary and palm-oil producers (Castro, 2016). The Inter-American Court on Human Rights also affirmed major displacement within the Choco region following a visit by a rapporteur to Colombia, and linked it explicitly to armed groups forcibly acquiring land and private companies developing oil palm plantations for biofuel production (IACHR, 2009).

Many communities returned to their lands, only to find it had been overtaken by palm oil plantations. In many cases, the land titles continue to be disputed and Afro-Colombians continue to be subject to harassment from interested actors for persevering in their claims (Burgos, Oct. 7, 2020) (Castro, Oct. 23, 2020) Additionally, many community members have been permanently displaced due to the lack of resolution and violence. Where land was abandoned by the unlawful occupants and communities were able to re-establish, they have faced the challenge of restoring land that has been degraded due to the plantations (Abramovich, Oct 23, 2020).

In addition to the overt land seizures, since 2005, Burgos et al (2011) describe how, the development of an agri-industry for biofuel production has led to negative impacts on Afro-Colombian smallholders. Through 'production alliances', farmers agree to produce palm oil on their land in exchange for guarantee of purchase. According to Burgos and Castro (Oct. 7 / Oct. 23, 2020), these alliances lead to a loss of land control as smallholders are forced to adopt agro-industrial practices stipulated by the major biofuel producers. They also found evidence of exploitative contracts that may result in little income security for Afro-Colombians smallholders. A longer term effect is that traditional livelihoods are undermined. The use of production alliances has grown exponentially since 2000 from 1.4% of the total land used for palm oil cultivation to 18.7% in 2009 (Marin Burgos et al., 2011). According to Castro (Oct. 23, 2020), this trend continues today, driven by more generous credit provision for biofuel producers adopting these alliances.

5.4.3 Rights Affected

Right to life, liberty and security of person

Afro-Colombian communities suffered harassment, violence and even death at the hands of actors with interest in their lands for palm oil plantations. According to Victor Abramovich (Oct. 23, 2020), Afro-descendants more generally have a particularly high risk of experiencing violence. Castro (Oct. 23, 2020) explained that the threat of violence continues today for those communities claiming their land.

Right of access to justice

Afro-Colombian communities with collective land titles have used the administrative and judicial system to claim their land titles, however the interviewees attested to continued disputes over these titles, some relating to unresolved claims prior to the conflict (Castro, Oct. 23, 2020) and others for illegal appropriation of land (Abramovich, Oct. 23, 2020). The challenges faced in obtaining their land titles indicate deep flaws in the provision of access to justice for these PAD communities.

Right to land

According to the IACHR findings in 2009 (IACHR, 2009), 3,644 hectares of land currently allocated for oil palm plantations had not yet been restored to their communities and remained under illegal occupation.

Additionally, Abramovich and Castro (Oct. 23 / Oct. 23, 2020), explained that land that has been cultivated for palm oil plantations becomes degraded and may therefore not allow for a return to its traditional use for growing food crops. According to these sources, significant investments are required to restore the soil, which Afro-Colombian communities from these areas are often not able to afford.

The use of land has also been shown to be impacted through the production alliances, whereby Afro-Colombians are restricted to palm oil production for a long period. Castro (Oct. 23, 2020) mentioned testimonies from Afro-Colombians who expressed regret at entering into these agreements due to loss of control over their land.

These are violations of specific rights of PAD, namely “the right to property and to the use, conservation and protection of lands traditionally occupied by them and to natural resources in cases where their ways of life and culture are linked to their utilization of lands and resources” (General Recommendation No.34, 2011).

Critically, the loss and degradation of land has cascading effects on several other rights - as described below.

Right to Food

The Afro-Colombian communities studied within this case study have lived for generations through subsistence farming. The expansion of palm oil production directly impacts their ability to farm, either through the seizure and degradation of lands or the loss of control over production observed under production alliance contracts with palm oil companies. Additionally, Castro (Oct. 23, 2020) explained that in the region of Maria de Montes, the depletion and contamination of water sources threatens any remaining food production as well as fish stocks - the latter being an important source of food in local diets. These developments, therefore, threaten the food security of these communities.

Right to Water

This impact was noted in Maria de Montes, given that it is a dry tropical region. Afro-Colombians living here have been raising complaints of water shortages and contamination linked to the arrival of palm oil plantations due to the plantations' high water needs and use of agro-chemicals.

Right to health

According to Castro (Oct. 23, 2020) , the contamination of water supply from oil palm plantations is having negative impacts on health. Afro-colombian communities she interviewed in Maria de Montes complained of dermatological illnesses, digestion-related illnesses and vaginal infections. This spurred a call for a study to analyse the water for contamination, however, at the time of her visit, Castro and the community had not received the results of this study.

Right to culture

Two forms of the specific rights of PAD are observed to be affected, namely “the right to their cultural identity, to keep, maintain and foster their mode of life and forms of organization, culture, languages and religious expressions;” and “the right to the protection of their traditional knowledge and their cultural and artistic heritage” (General Recommendation No.34, 2011)

The permanent displacement of Afro-Colombian communities from their lands leads to a direct impact on the preservation of their culture. According to Abramovich (Oct. 23, 2020), the cultural identity of these communities is intricately tied to their land, as implied by the recognition of collective territories under the Law 70 of 1993. Indeed, the IACHR report (2009) stated that, “Forced displacement interferes substantially with their livelihoods, pursuit of cultural practices, and traditional ways of life, as well as their participation in community life.”

As seen, subsistence farming is a core aspect of the traditional way of life of the Afro-Colombian communities. It is also a source of traditional knowledge. Many Afro-Colombian farmers are deeply troubled by the fact that their cultural practices and indigenous knowledge are being replaced by conventional and unsustainable farming methods centred on production of cash crops, explained Castro (Oct. 23, 2020). Farming is also a source of pride for Afro-Colombian communities whose cultural identities are intertwined with their livelihood, according to Castro (Oct. 23, 2020).

The harassment, violence against, and murder of community leaders is also identified as a major threat to the community, as these leaders are integral to the cohesion of the community, to defending their rights and disseminating their traditional knowledge to future generations. Abramovich (Oct. 23, 2020) also said that the forms of organisation of these communities are disrupted by allies of the paramilitary or agro-industry, making false claims as members of their ‘Consejos Comunitarios’.

Rights of women

Afro-Colombian women suffer disproportionate impacts from forced displacement and its effects (IACHR, 2009). Within the Maria de Montes region, there has been a negative impact on women's health due to the contamination of water supply.

Additionally, Castro (Oct. 23, 2020) related that in response to the water issues, women took on the responsibility for collecting clean water - walking miles to access a known source or paying for travel there.

The loss of land has led many Afro-Colombians to work as labourers on the oil palm plantations and disrupted the previous distribution of work. According to testimonies, women found they previously had greater autonomy and independence as they controlled the sale of certain agricultural products and livestock reared within the household (Castro, Oct. 23, 2020).

5.4.4 Evidence of Racial Discrimination

The human rights violations arising from the development of oil palm plantations are a form of indirect and structural racial discrimination.

According to Castro (Oct. 23, 2020), there was a clear overlap between the paramilitary-led violence and land seizures and the territories occupied by afro-descendants. This overlap can firstly be related to the historical legacy of slavery which meant marginal territories were occupied by Afro-descendants to create safe havens for escaped and freed slaves - called '*Palenques*'. Historical discrimination and accumulation of disadvantage also mean that these communities had fewer resources and political power. The paramilitary undoubtedly calculated that, as a result, these communities would struggle to gain recognition of their legitimate claim to territories and reparations.

Indeed, Abramovich recounted how the state administration and judicial process seemed to be biased against Afro-descendant communities, necessitating intervention by the IACHR. He claimed the state response was not explicitly related to their colour (Abramovich, Oct. 23, 2020), but rather a legacy of historical discrimination manifest in the higher poverty levels and stifled political power compared to other actors.

Burgos (Oct. 7, 2020) drew attention to the power of the agro-industry in lobbying for favourable policies and subsidies for the agro-industry. These reflect discrimination manifest in a lack of opportunities for political participation of Afro-Colombian communities and disproportionate representation by the elite. For instance, Carlos Murgas, the Minister of Agriculture credited with being a major architect of the pro-palm oil policy framework, was also president of Fedepalma - the federation of palm oil producers, and founder of palm-oil company Oleoflores (Oleoflores, n.d.). Castro (Oct. 23, 2020) explained how Carlos Murgas exemplified the corrupt and self-serving practices that drove the palm oil expansion. Unsurprisingly the palm oil companies were the main beneficiaries of these policies as they capture the bulk of the profits through vertically integrated operations (Marin Burgos et al., 2011), further cementing historical inequalities in benefiting from economic development in the country and access to financial resources.

The impairment of Afro-Colombian communities' human rights also results indirectly from poor state policies and their lack of investment in the Afro-descendant communities. The water issues raised by Castro (Oct. 23, 2020) for instance, reflect poor investments in water supply infrastructure, creating a poverty trap whereby communities suffer negative health conditions amongst other challenges, which perpetuate multi-generational poverty. These constitute indirect racial discrimination whereby, unintentionally, state practices have had a disproportionately negative effect on PAD.

5.4.5 Other Key Insights

One insight from this case study is that climate mitigation may be just one of several drivers for a resulting policy. As mentioned previously, national climate change mitigation objectives and the biofuel targets set by the European Union influenced Colombia's palm oil expansion. However, additional goals included rural development (García & Calderón, 2012), expediting the peace process, providing an alternative to the production of illicit crops (Gronewold, 2011) and finally self-serving corruption. Interestingly, the interviewees did not believe that in Colombia, national climate mitigation was an important driver for these policies. Instead, Castro (Oct. 23, 2020) argues it may have been used to legitimise their actions. Climate mitigation policies and their impacts on Afro-descendants must therefore be analysed within a wider context of objectives to understand how and why they manifest in practice.

Another finding from the research and interviews is that biofuel development is often linked to the promotion of agro-industrial modes of production which threaten the traditional ways of life of rural Afro-descendant communities. Part of this results from the exploitative practices of the agro-industry, which seek to maximise short-term gain in contrast to operating sustainable modes of production. This has implications for future biofuel policies and means this case study can serve as an example to other countries.

Finally, what emerged from the interviews with Burgos and Castro (Oct. 7 / 23, 2020), was that production alliances represent a growing vehicle for the expansion of agro-industrial modes of agricultural development. They raised concerns that this form of production was being legitimised as a 'fairer' form of agricultural development despite the power asymmetries between the agro-industry actors and small landholders. Further research is required to appreciate their actual and perceived impact on smallholders such as Afro-Colombian communities. It was raised that some farmers supported these alliances given they had greater access to technological and financial resources leading to improvements in their financial situation.

5.4.6. Solutions

Over the period 2003 to 2013, the Inter-American Court of Human Rights monitored the situation of the *Consejo Comunitarios Jiguamiandó* and *Curbarado* within the Chocó region. They recommended several provisional measures, which can be considered recommended solutions to the violations arising in the area. These recommendations focused predominantly on provision of protection and material support to community members, and ensuring that administrative and judicial processes for restitution of land are undertaken in a fair and timely manner.

The Colombian government introduced a number of measures to create safe zones for people displaced by the conflict and protect Afro-descendant territories from exploitation. Additionally, processes for restitution of land to victims of the conflict were accelerated under the 2011 “Ley de Víctimas y de restitución de tierras”. These are recognised as important remediation measures, however, they have been criticised for their design and implementation. For example, the 2011 law is operational for a period of 10 years, following which land claims will be dropped. According to one source, during the first 5 years of implementation, only 5% of existing claims have been successfully restituted (Castro, 2016). Indeed, Castro (Oct. 23, 2020) described the law as a tool for legitimising land grabs.

A longer term solution is to ensure greater participation from Afro-descendant communities in decisions affecting their land and areas. Burgos (Oct. 7, 2020), for instance, recommended that rural development policies need to be developed in collaboration with local communities and address the excessive influence of agro-industrial actors in policy development. She explained that these communities have been proposing practical solutions to enable development on their own terms, including support in accessing markets for their produce.

6. Conclusion

6.1 Climate Change and Human Rights of People of African Descent

The four case studies we have examined in this report are all profoundly tied to a specific local context and are therefore unique in their expression. Despite their very localized particularities, it is possible to identify some trends and patterns from them, notably around the human rights impacted.

An element that can be highlighted is that the North/South America divide along which we had built our case study selection has coincidentally overlapped quite nicely with a rural/urban divide. Indeed, the North American context in both case studies appears relatively similar, and the climate impacts discussed concern largely urban populations of African descent. By contrast, both South American cases deal with climate impacts that affect rural Afro-descendants. This does not mean that all Afro-descendants in Colombia or Ecuador are living in rural areas (in fact, the majority lives in cities). But there are in both countries important communities of African descent living in rural areas, with distinct organizational forms and livelihoods such as subsistence farming. The result of this is that the discussions around right to land or right to food are approached very differently in an urban or rural context, with vulnerabilities that are expressed at different levels. As an example, the questions around the right to food vary between being prevented from producing one’s own food for survival (rural context) and losing access to the stores and facilities that provide food for one’s subsistence (urban context).

Beyond these regional divides, our case studies were also divided in climate impacts and climate mitigation policies. In terms of climate impacts, both Hurricane Katrina and floods in Esmeraldas present – despite their very different urban and rural context – important

similarities: in both cases, the various outcomes for the rights of PAD are a consequence of a history of discriminatory practices such as housing policies and deprivation of economic power that led to location in cheap and risky areas. The question of “climate refugees” also emerged in both of these cases, as the direct impacts of the disasters and the lack of infrastructure and housing have meant that communities need to find other solutions, of which migration is a possible one. Furthermore, it is interesting to note that despite these two cases being approached as climate impacts cases, both studies have in their investigation also touched upon the human rights threats linked to the adaptation policies that respond to these climate disasters.

In terms of climate change mitigation policies, both the California and the Colombia case have shown that they can result in a negative impact as they interact with the historical legacy of discrimination. In Colombia, violence came to the areas inhabited by Afro-descendants because they are sparsely populated with less infrastructure and control by the central government. In California, major GHG emitting industries are located near Afro-descendant communities, a result of historical discrimination.

Another topic of interest was the notion of environmental racism, which emerged as a key historical background element in the studies on California, Colombia and Ecuador. Indeed, the question of extractive and polluting industries located in places inhabited by afro-descendants with less political power was evoked by the interviewees of these three case studies. We can also note that poor infrastructure and housing are common elements of these areas.

A commonality that emerged from the four case studies was a major issue around the way the state engages with afro-descendants. Indeed, a lack of participation or lack of remediation for wrongs made by state and private actors was observed in all cases. In Colombia, the judicial process was biased against afro-descendants and the state was complicit with agro-industry bodies to support expansion of palm oil. In Ecuador, there was a lack of participation of afro-descendants in adaptation policies leading to failures and human rights violations. In California, the state’s policy choice of cap and trade shows the lack of urgency in dealing with historical environmental racism. In New Orleans, the post-hurricane response highlighted a failure of the state to respond to the needs of Afro-Americans. The same can be said of the floods in Esmeraldas, Ecuador, where the state pushes adaptation policies that do not respond to the local population’s needs. This lack of participation and remediation is intrinsically linked with power dynamics that put PAD at a systemic disadvantage.

Finally, Table 3 in Appendix B (p. 68) illustrates the different rights that were noted to be affected in each case study. First of all, we can observe that a wide range of rights have been discussed in the different case studies, sometimes overlapping, other times very specific to a particular case. For example, we can see that the question of right to water or women’s rights was only discussed in the case of biofuels in Colombia, while Hurricane Katrina sparked a conversation around the right to education. We can also observe some regional differences such as those evoked above; for example, we can see that the question of right to food and land is particularly important in the Latin American rural contexts, which is connected to their reliance on subsistence economies. On the other hand, the right to health has been consistently evoked throughout all case studies, highlighting the central connections between

climate change and human health. We can also observe that the rights to participation and culture have been evoked in more than one case study - thereby underlining that these rights, which may not be the first that come to mind when thinking about climate change impacts, should also be paid attention to and protected when dealing with the consequences of climate change on PAD.

These elements serve to address our first research question on the human rights of PAD most affected by climate change and climate policies. As just discussed, each case study featured its own unique combination of affected rights. However, the common trends and patterns we have identified above allow us to reaffirm the substantial impacts of climate change on PAD's right to life, health, safe housing, food, water, land, education, work, participation and culture. The exact outcomes for each right vary according to the context: the region of the world, whether the setting is urban or rural, whether we are talking about impacts of climate change or of climate policies, etc. But no matter the combination of these factors, the rights of PAD are always, to some extent, hanging in the balance.

6.2 Climate Change and Racial Discrimination of People of African Descent

Our case studies have allowed us to highlight the ways in which racial discrimination interacts with climate change and climate policies to disproportionately impact PAD. All the cases we have examined demonstrated clear signs of indirect racial discrimination - though the intent isn't to discriminate, each national context we examined displayed features that contributed to putting PAD in a disadvantaged situation. The case studies also underlined the central role of structural and historical discrimination in compounding the effects of climate change for PAD. In the case of Hurricane Katrina, the structure of the housing system, rooted in historical policies that had direct discriminatory intents, has led to a disproportionate vulnerability of PAD to the flooding itself, while also preventing them from benefiting from the adaptation policies put in place. In Ecuador, it is a long-standing history of economic disempowerment that has made PAD in Esmeraldas the primary victims of the consequences of the floods. In California, the institutional mechanisms in place that have made PAD primarily exposed to polluting industries were highlighted as an important factor in understanding the discriminatory outcomes of the cap-and-trade system. Finally, in Colombia, the struggles over land that underlie the question of biofuel development are also grounded in decades of structural discrimination. Thus, the disproportionate impact of climate change on PAD discussed in the case studies should be traced back to forms of discrimination that, despite being indirect in nature, have profound historical roots and are embedded in the structures and institutions of the societies we examined.

Another finding that emerges from our four case studies is the role of climate change as contributing to an accumulation of discriminations. Indeed, what was highlighted in our cases is that climate change and climate policies impacts cannot be examined in a vacuum; rather, they need to be understood as bringing out and exacerbating existing forms of discrimination. The challenges posed by climate change, and our attempts to mitigate and adapt to it, represent a new terrain where existing discriminations find new expressions and ripple through in new ways. Climate change, rather than being a separate phenomenon, comes as an

additional layer to juxtapose itself on existing histories of violence and oppression. Its disproportionate impacts on PAD further contribute to an accumulation of injustices that feed into vicious circles of disadvantage. As such, a climate justice approach to the climate crisis will need to tackle these differentiated impacts on disadvantaged communities at their very root, by engaging a profound reform of the institutions in a given context.

These elements serve to answer our second research question on the disproportionate impacts of climate change and climate policies on PAD. Through our four case studies, we have shown concrete examples of the disproportionate impact of climate change. As this section has discussed, it is important to trace back this differentiated treatment to structural and historical discrimination, as well as to highlight the accumulation of discriminations that spill from a domain to the next. Though each case study displayed its own individual characteristics, they all had in common a complex background history of disadvantage and oppression that has, in the recent decades, been reflected in the arena of climate change. The extent of the disproportionate impact is difficult to quantify and depends on the specific configuration of this background history. However, our case studies have shown that when engaging in depth with this history, the evidence of racial discrimination emerges and allows us to better understand how this affects PAD and their livelihoods.

6.3 Summary

This research set out to examine the impacts of climate change on the rights of PAD, and to demonstrate the role of racial discrimination in creating these outcomes. Through four case studies, we have illustrated how climate change, human rights and racial discrimination intersect in specific settings. These have revealed complex patterns of structural and historical discrimination, underlining the necessity to engage with the complexities of a given context to properly tease out the impacts of climate change and climate policies on human rights. The case studies have also highlighted the entanglement of the various human rights impacted by climate change - and thus, the necessity to take a holistic approach when addressing climate change through policies, in order to avoid infringing on other rights while trying to address the violation of one. Particularly, making sure that the rights to participation, and culture are respected and strengthened is crucial while designing mitigation and adaptation policies.

Demonstrating the extent of the role of racial discrimination has proven complex. The explanation for this is twofold: on the one hand, the impacts of climate change are irremediably entangled in existing environmental contexts and can be difficult to tease out. On the other hand, and most importantly, the role racial discrimination plays in climate change impacts is tied to context-specific histories of structural discriminations that need to be addressed in depth if one hopes to demonstrate the disproportionate exposure of PAD to climate change impacts. As such, we come out of this analysis ever more convinced of the necessity to attack the problem to its root by profoundly questioning the discriminatory systems upon which our societies are built. Only then will we be able to carve alternative, more just paths forward.

We also acknowledge the limitations encountered by our research. As identified in the literature review, evidence of climate change impacts on the rights of PAD is largely limited geographically, with a paucity of research conducted in Europe or in Asia. Our case study selection was limited by this observation, pushing us to limit ourselves to cases in the Americas. Furthermore, availability of research and linguistic limitations prevent us from

examining a LAC case study set in an urban context (e.g. in Brazil). As most of the PAD in the region live in urban areas, this limits the applicability of our findings to the experiences of PAD in this region. Two of our case studies (California and Ecuador) were selected on the basis of one main study available in the literature. This was partially addressed by interviewing experts outside the research team; however, our findings would need to be further corroborated by additional researchers. We were also limited in time and resources in terms of the number of experts interviewed for each case study. Finally, we recognize that intersections with other factors such as gender would have deserved greater attention to paint a clearer picture of lived experiences of climate change impacts. We hope to address some of these limitations through the recommendations we provide below.

The intersection of climate change impacts, human rights and racial discrimination in the specific case of PAD is still a nascent field of study. It is nonetheless crucial, especially considering the rising urgency of the climate crisis and its consequences for the most vulnerable in our societies. As such, we hope that our research has contributed to building evidence on this important issue. We remain hopeful that further academic engagement with structural discrimination and its ever-present consequences will ultimately help us find more sustainable and just solutions - in addressing climate change and beyond.

7. Recommendations

Drawing on our research, two types of recommendations are made. The first are broad recommendations focused on reducing the negative impacts of climate change on PAD. The second set of recommendations relate to areas for further research to fill identified lacunae in knowledge as well as respond to limitations of the research.

1. Historical and structural racial discrimination needs to be considered for its potential to exacerbate the impacts of climate change on PAD. Decision-makers should examine the interaction between these forms of racial discrimination and climate change to inform their policymaking. In particular in the following areas:
 - Emergency response plans need to be cognizant of unintended impacts on PAD;
 - Greater recognition of the existing vulnerability of PAD when designing adaptation measures;
 - Interaction between climate mitigation policies and existing air pollution distribution;
 - Risk of climate mitigation policies incentivising land grabbing.
2. Special measures should be considered as part of a state's climate change response as these can enhance the effectiveness of emergency response and adaptation measures by reducing the vulnerability of PAD. They are also important to reducing the social impacts of climate mitigation measures. Based on our research, focus areas for special measures are:
 - Access to health and housing given that climate change presents a significant threat to both and they are a major source of accumulation of disadvantage;

- Access to land, particularly to reduce the impact of mitigation policies which can incentivise land grabbing;
 - Access to education to ensure PAD have greater access to economic opportunities, political participation and access to justice. These are fundamental to reduce the vulnerability and impacts of climate change effects and policies;
3. Priority should be given to increase the participation of PAD in the design and implementation of climate change emergence response, adaptation and mitigation measures. Again, these are necessary to not only reduce the negative impacts on PAD but are critical to their long term effectiveness particularly where relocation may be necessary.
 4. Opportunities should be taken to address both climate change and racial discrimination together, rather than treated separately.
 5. From our research, we identified areas which would benefit from further research:
 - The impacts of climate change on PAD in Europe and Asia. Our research was not able to investigate this further given the time constraints and lack of written evidence. It was identified that case studies that may bring insights on the situation of PAD include the 2003 heat wave in Europe and the situation of PAD living on islands considering a planned migration in response to climate change.
 - The inclusion of PAD in national climate change strategies and risk assessments to confirm whether, as the authors suspect, that the specific risks faced by PAD are missing from the documents informing climate change planning.
 - Intersectionality of race and other factors that may enhance vulnerabilities to climate change.
 - Undertake further research on case studies of climate adaptation and mitigation policies to understand their impact on PAD. The issues raised regarding carbon markets would benefit from additional case studies to understand if the experience in California can be extrapolated to other contexts.
 - The issue of climate refugees was raised in our analysis but would benefit from a focused research on whether PAD face a disproportionate risk of forced migration due to climate change and additional support measures that may be required to mitigate the negative impacts of displacement.

8. Bibliography

- Abramson, D, Redlener, I, Stehling-Ariza, T, Fuller, E. (2007) “The Legacy of Katrina’s Children: Estimating the numbers of at-risk children in the Gulf Coast states of Louisiana and Mississippi,” National Center for Disaster Preparedness, *Research Brief 2007:12*. Columbia University Mailman School of Public Health, New York.
- Aguiar, F. C., Bentz, J., Silva, J. M. N., Fonseca, A. L., Swart, R., Santos, F. D., & Penha-Lopes, G. (2018). Adaptation to climate change at local level in Europe: An overview. *Environmental Science & Policy*, 86, 38–63.
<https://doi.org/10.1016/j.envsci.2018.04.010>
- APHA. (2018). *Climate Change, Health and Equity*. American Public Health Association.
<https://www.apha.org/topics-and-issues/climate-change/guide>
- Arguello, M. D. (2020, November). *Interview with Martha Dina Arguello* [Personal communication].
- Badger, E. (2014, April 16). Pollution is segregated, too. *Washington Post*.
<https://www.washingtonpost.com/news/wonk/wp/2014/04/15/pollution-is-substantially-worse-in-minority-neighborhoods-across-the-u-s/>
- Baird, R. (2008). *The Impact of Climate Change on Minorities and Indigenous Peoples*. Minority Rights Group International.
- Barrio Lamarche, D., Kron, A., Xavier Mena, F., & Schachter, B. (2019). *Climate Change and Human Rights: Contributions by and for Latin America and the Caribbean* (p. 101). Office of the United Nations High Commissioner for Human Rights.
- Biesbroek, G. R., Swart, R. J., Carter, T. R., Cowan, C., Henrichs, T., Mela, H., Morecroft, M. D., & Rey, D. (2010). Europe adapts to climate change: Comparing National Adaptation Strategies. *Global Environmental Change*, 20(3), 440–450.
<https://doi.org/10.1016/j.gloenvcha.2010.03.005>
- Berke, P. R., & Campanella, T. J. (2006). “Planning for postdisaster resiliency”. *ANNALS American Academy of Political and Social Science*, 604. 192-207
- Boeckmann, M., & Zeeb, H. (2014). Using a Social Justice and Health Framework to Assess European Climate Change Adaptation Strategies. *International Journal of Environmental Research and Public Health*, 11(12), 12389–12411.
<https://doi.org/10.3390/ijerph111212389>
- Borden Colley, S. (2019, November 12). *Black and Indigenous voices often missing from climate change discussions* | CBC News. CBC.
<https://www.cbc.ca/news/canada/nova-scotia/climate-change-indigenous-black-nova-scotia-poverty-race-1.5350495>
- Bush, G. (2005). September 15, 2005 President discusses hurricane relief in address to the nation (Jackson Square, New Orleans, Louisiana).
<https://georgewbush-whitehouse.archives.gov/news/releases/2005/09/20050915-8.html>
- California Air Resources Board. (2018). *About* | California Air Resources Board. California Air Resources Board. <https://ww2.arb.ca.gov/about>
- California Air Resources Board. (2020). *Cap-and-Trade Program* | California Air Resources Board. California Air Resources Board. <https://ww2.arb.ca.gov/our-work/programs/cap-and-trade-program/about>
- Case of the Saramaka People vs Surinam, (Inter-American Court of Human Rights 28 November 2007). http://www.corteidh.or.cr/docs/casos/articulos/seriec_172_ing.pdf
- Castro, N. (2016, October 18). “No la llames africana”. La violenta expansión de la palma de aceite en Colombia. *Carro de combate*.
<https://www.carrodecombate.com/2016/10/18/no-la-llames-africana-la-violenta-expansion-de-la-palma-de-aceite-en-colombia/>
- Clark, L. P., Millet, D. B., & Marshall, J. D. (2014). National Patterns in Environmental

- Injustice and Inequality: Outdoor NO₂ Air Pollution in the United States. *PLoS ONE*, 9(4), e94431. <https://doi.org/10.1371/journal.pone.0094431>
- Clarke, A. (2012). *People of African Descent in Europe* (UKREN Briefing Paper, pp. 1–14). UK Race and Europe Network. <https://www.ukren.org/uploads/Black%20Europeans%20Briefing%20Paper%20Summer%202012.pdf>
- Clean Energy Canada. (2019, September 20). The link between climate change and the health of Canadians. *Clean Energy Canada*. <https://cleanenergycanada.org/the-link-between-climate-change-and-the-health-of-canadians/>
- Cole, L. W., & Foster, S. R. (2001). *From the ground up: Environmental racism and the rise of the environmental justice movement*. New York University Press.
- Comerio, M. (1998). *Disaster hits home: New policy for urban housing recovery*. Berkeley: University of California Press
- Committee on the Elimination of Racial Discrimination. (2011). *Racial discrimination against people of African descent*. United Nations.
- Conley, D. (1999). *Being Black, living in the red: Race, wealth, and social policy in America*. University of California Press.
- Cuomo, C. J. (2011). Climate Change, Vulnerability, and Responsibility. *Hypathia*, 26(4), 690–714.
- Cushing, L., Blaustein-Rejto, D., Wander, M., Pastor, M., Sadd, J., Zhu, A., & Morello-Frosch, R. (2018). Carbon trading, co-pollutants, and environmental equity: Evidence from California’s cap-and-trade program (2011–2015). *PLOS Medicine*, 15(7), e1002604. <https://doi.org/10.1371/journal.pmed.1002604>
- Cushing, L., Wander, M., Morello-Frosch, R., Pastor, M., Zhu, A., & Sadd, J. (2016). *A Preliminary Environmental Equity Assessment of California’s Cap-and-Trade Program* (p. 16). University of Southern California, University of California - Berkeley, Occidental College. https://dornsife.usc.edu/assets/sites/242/docs/Climate_Equity_Brief_CA_Cap_and_Trade_Sept2016_FINAL2.pdf
- Daigneau, E. (2017, March). *A Plan That Tackles Climate Change and Racial Discrimination*. Governing.Com. <https://www.governing.com/topics/transportation-infrastructure/gov-portland-climate-change-racial-equity.html>
- Demand Catalogue by People of African Descent & Black Europeans*. (2014). Initiative Black People in Germany. https://www.enar-eu.org/IMG/pdf/demandcatalogue_pad_be_short_version.pdf
- Dixon, D. (1997). *Race, class and national identity in black Ecuador: Afro-Ecuadorians and the struggle for human rights* (ETD Collection for AUC Robert W. Woodruff Library Paper 193).
- Elkind, E. (2020, November). *Interview with Ethan Elkind* [Personal communication].
- EU Commission. (2020, January 6). *Biofuels* [Text]. Energy - European Commission. https://ec.europa.eu/energy/topics/renewable-energy/biofuels_en
- Fundamental rights of people of African descent, P8_TA(2019)0239 1 (2019). https://www.europarl.europa.eu/doceo/document/TA-8-2019-0239_EN.pdf
- Ferro, M. (2020, April 26). *Americas—Afro-Descendants: A Global Picture—Minority Stories*. Minorityrights.Org. <http://stories.minorityrights.org/afro-descendants/chapter/301/>
- Food and Agriculture Organization of the United Nations. (n.d.). *Climate change and environmental sustainability in Latin America and the Caribbean*. Retrieved 29 April 2020, from <http://www.fao.org/americas/prioridades/cambio-climatico/en/>
- Freire, G., Diaz-Bollina, C., Schwartz Orellana, S., Soler Lopez, J., & Carbonari, F. (2018). *Afro-descendants in Latin America: Toward a Framework of Inclusion*. World Bank. <https://openknowledge.worldbank.org/handle/10986/30201>
- Frigerio, I., & De Amicis, M. (2016). Mapping social vulnerability to natural hazards in Italy: A suitable tool for risk mitigation strategies. *Environmental Science & Policy*, 63, 187–196. <https://doi.org/10.1016/j.envsci.2016.06.001>

- García, H., & Calderón, L. (2012). *Evaluación de la política de Biocombustibles en Colombia*.
General recommendation No.34, CERD/C/GC/34 (2011).
<https://www.refworld.org/docid/4ef19d592.html>
- Government of Canada, S. C. (2019, February 27). *Diversity of the Black population in Canada: An overview*. <https://www150.statcan.gc.ca/n1/pub/89-657-x/89-657-x2019002-eng.htm>
- Government of Canada, S. C. (2020, February 25). *The Daily—A socioeconomic portrait of Canada's Black population*. <https://www150.statcan.gc.ca/n1/daily-quotidien/200225/dq200225b-eng.htm>
- GRISUL. (2018). *Pacha Defending the Land: Extractivism, conflicts, and alternatives in Latin America and the Caribbean*. Group of International Relations and Global South.
- Gronewold, N. (2011, May 2). ENERGY POLICY: Biofuels push becomes weapon in Colombia's war on narco-traffickers. *E&E News*.
<https://www.eenews.net/stories/1059948454>
- Hajat, S., Ebi, K. L., Kovats, S., Menne, B., Edwards, S., & Haines, A. (2003). The human health consequences of flooding in Europe and the implication for public health: A review of the evidence. *Applied Environmental Sciences and Public Health*, 1(1), 13–21.
- Hardoy, J., & Pandiella, G. (2009). Urban poverty and vulnerability to climate change in Latin America. *Environment and Urbanization*, 12(1), 231–242.
<https://doi.org/10.1177/0956247809103019>
- Hardy, D., Lazrus, H., Mendez, M., Orlove, B., Rivera-Collazo, I., Roberts, J. T., Rockman, M., Thomas, K., Warner, B. P., & Winthrop, R. (2018). *Social Vulnerability: Social Science Perspectives on Climate Change, Part 1*. USGCRP Social Science Coordinating Committee. <https://www.globalchange.gov/content/social-science-perspectives-climate-changeworkshop>
- Harlan, S. L., Pellow, D. N., Roberts, J. T., Bell, S. E., Holt, W. G., & Nagel, J. (2015). Climate Justice and Inequality. In R. E. Dunlap & R. J. Brulle (Eds.), *Climate Change and Society* (pp. 127–163). Oxford University Press.
<https://doi.org/10.1093/acprof:oso/9780199356102.003.0005>
- Harris, Gardiner (2005). "Police in Suburbs Blocked Evacuees, Witnesses Report". *New York Times* (Sept. 10, 2005)
<https://www.nytimes.com/2005/09/10/us/nationalspecial/police-in-suburbs-blocked-evacuees-witnesses-report.html>
- Hoerner, J. A., & Robinson, N. (2008). *A Climate of Change: African Americans, Global Warming, and a Just Climate Policy in the U.S.* (p. 69). Environmental Justice and Climate Change Initiative. <https://urbanhabitat.org/files/climateofchange.pdf>
- Hollis, A. (2019, July 22). *African Americans Are Disproportionately Exposed to Extreme Heat*. Union of Concerned Scientists. <https://blog.ucsusa.org/adrienne-hollis/african-americans-are-disproportionately-exposed-to-extreme-heat>
- Recognizing the contribution of environmental human rights defenders to the enjoyment of human rights, environmental protection and sustainable development, A/HRC/40/L.22/Rev.1 (2019).
- Human Rights Council. (2019). *Human rights and climate change*. United Nations.
<https://documents-dds-ny.un.org/doc/UNDOC/LTD/G19/208/58/PDF/G1920858.pdf?OpenElement>
- IACHR. (2009). *Observations of the IACHR after visit of the Rapporteur on the Rights of Afrodescendants and against Racial Discrimination*.
<http://www.cidh.org/countryrep/ColombiaAfrodescendientes.eng/ColombiaAfros2009cap3-4.eng.htm>
- Jayasuriya, S. (2006) "Identifying Africans in Asia: What's in a Name?". *African and Asian Studies Vol. 5 No. 3-4*
- Kay, J., & Katz, C. (2012, June 4). Pollution, Poverty and People of Color: Living with

- Industry. *Scientific American*. <https://www.scientificamerican.com/article/pollution-poverty-people-color-living-industry/>
- Knabb, R. D., Rhome, J. R., & Brown, D. P. (2005). *Tropical cyclone report: Hurricane Katrina, 23-30 August 2005*. Miami, FL: National Hurricane Center
- Levidow, L. (2013). EU criteria for sustainable biofuels: Accounting for carbon, depoliticising plunder. *Geoforum*, 44, 211–223. <https://doi.org/10.1016/j.geoforum.2012.09.005>
- Lewis, B. (2018). Challenges Confronting a Human Rights-Based Approach to Climate Change. In B. Lewis, *Environmental Human Rights and Climate Change* (pp. 171–199). Springer Singapore. https://doi.org/10.1007/978-981-13-1960-0_8
- Limon, G. (2020, November). *Interview with Gladys Limon* [Personal communication].
- Luis Freire, A. (2020, May 23). Crecidas y deslizamientos afectan a comunidades del norte de Esmeraldas. *El Universo*. <https://www.eluniverso.com/noticias/2020/05/23/nota/7849824/crecidas-deslizamientos-afectan-comunidades-norte-esmeraldas>
- Lundgren, L., & Jonsson, A. (2012). *Assessment of Social Vulnerability—A literature review of vulnerability related to climate change and natural hazards* (CSPR Briefing No. 9; pp. 1–16). Centre for Climate Science and Policy Research. <https://www.diva-portal.org/smash/get/diva2:552075/FULLTEXT01.pdf>
- Marin Burgos, V., Lovett, J. C., & Clancy, J. S. (2011, April). *Biofuels and Land Appropriation in Colombia: Do Biofuels National Policies Fuel Land Grabs?* International Conference on Global Land Grabbing.
- Masoero, A. (2016, February 2). *Ecuador – Emergencies Declared in Esmeraldas, Over 2,000 Still Displaced by Floods*. Floodlist. <http://floodlist.com/america/ecuador-esmeraldas-floods-emergency-january-2016>
- Minorities Rights Group International. (n.d.). *Afro-Descendants: A Global Picture—Europe*. Minority Stories. Retrieved 25 April 2020, from <http://stories.minorityrights.org/afro-descendants/chapter/europe/>
- Minority Rights Group International. (2020). *Afro-Ecuadorians*. Minority Rights Group. <https://minorityrights.org/minorities/afro-ecuadorians/>
- Mock, B. (2016). *The Racial Justice Flaws in California’s Climate Bill*. CityLab. <http://www.citylab.com/politics/2016/09/californias-climate-bill-is-not-protecting-the-health-of-black-and-latino-communities/500024/>
- Mock, B. (2019). *Beto O’Rourke’s \$1.5 Trillion Climate Plan Is Serious on Environmental Justice*. CityLab. <https://www.citylab.com/equity/2019/10/beto-orourke-interview-climate-change-plan-proposal-race/600562/>
- Mohai, P., Pellow, D., & Roberts, J. T. (2009). Environmental Justice. *Annual Review of Environment and Resources*, 34(1), 405–430. <https://doi.org/10.1146/annurev-environ-082508-094348>
- Morello-Frosch, R., Pastor, M., Sadd, J., & Shonkoff, S. (2009). *The Climate Gap: Inequalities in How Climate Change Hurts Americans & How to Close the Gap* (p. 32). University of Southern California. https://dornsife.usc.edu/assets/sites/242/docs/ClimateGapReport_full_report_web.pdf
- National Equity Atlas. (2020, October). *Air pollution | National Equity Atlas*. National Equity Atlas. <https://nationalequityatlas.org/indicators/Air-pollution#/?geo=020000000000006000>
- OHCHR. (n.d.). *OHCHR | OHCHR’s work on human rights and climate change*. Retrieved 30 October 2020, from <https://www.ohchr.org/en/issues/hrandclimatechange/pages/hrclimatechangeindex.aspx>
- International Convention on the Elimination of All Forms of Racial Discrimination, (1969). <https://www.ohchr.org/en/professionalinterest/pages/cerd.aspx>
- OHCHR. (2019, December 20). *Statement to the media by the United Nations’ Working Group of Experts on People of African Descent, on the conclusion of its official visit to*

Ecuador, 16-20 December 2019.

<https://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=25451&LangID=E>

- OHCHR. (2020a). *OHCHR | International standards*. OHCHR.
<https://www.ohchr.org/EN/Issues/Executions/Pages/InternationalStandards.aspx>
- OHCHR. (2020b). *OHCHR | International standards on the Right to Food*. OHCHR.
<https://www.ohchr.org/EN/Issues/Food/Pages/Standards.aspx>
- OHCHR. (2020c). *OHCHR | The Right to Food*. Food and Agriculture Organization of the United Nations. <http://www.fao.org/right-to-food/en/>
- OHCHR. (2020d, November). *OHCHR's work on human rights and climate change*. OHCHR.
<https://www.ohchr.org/EN/Issues/HRAndClimateChange/Pages/HRCClimateChangeIndex.aspx>
- OHCHR and UN-Habitat. (2014). *The Right to Adequate Housing*. OHCHR.
https://www.ohchr.org/documents/publications/fs21_rev_1_housing_en.pdf
- OHCHR and WHO. (2008). *The Right to Health*. OHCHR and WHO.
<https://www.ohchr.org/documents/publications/factsheet31.pdf>
- Oleoflores. (n.d.). *Oleoflores: La Empresa*. Retrieved 31 October 2020, from <https://www.oleoflores.com/about/historia>
- Olsson, L., Opondo, M., Tschakert, P., Agrawal, A., Eriksen, S. H., Ma, S., Perch, L. N., & Zakieldeen, S. A. (2014). Livelihoods and Poverty. In *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* (pp. 793–832). Cambridge University Press.
- Pager, D., & Shepherd, H. (2008). The Sociology of Discrimination: Racial Discrimination in Employment, Housing, Credit, and Consumer Markets. *Annual Review of Sociology*, 34, 181–209.
- Pastor, M., Sadd, J., & Hipp, J. (2001). Which Came First? Toxic Facilities, Minority Move-In, and Environmental Justice. *Journal of Urban Affairs*, 23(1), 1–21.
<https://doi.org/10.1111/0735-2166.00072>
- Peek, Lori and Krista Richardson. (2010) "In Their Own Words: Displaced Children's Educational Recovery Needs after Hurricane Katrina." *Disaster Medicine and Public Health Preparedness* 4(1): S63-S70.
- Plan for Climate Change and Environmental Justice | Joe Biden*. (n.d.). Joe Biden for President: Official Campaign Website. Retrieved 30 November 2020, from <https://joebiden.com/climate-plan/>
- Pollard, K. (1999, September). *America's Racial and Ethnic Minorities – Population Reference Bureau*. Population Reference Bureau.
<https://www.prb.org/americasracialandethnicminorities/>
- Poumadère, M., Mays, C., Le Mer, S., & Blong, R. (2005). The 2003 Heat Wave in France: Dangerous Climate Change Here and Now: The 2003 Heat Wave in France. *Risk Analysis*, 25(6), 1483–1494. <https://doi.org/10.1111/j.1539-6924.2005.00694.x>
- Reagan, M, Webb, G., Harkleroad, C, Brown, C, Reagan, L., & Murphy, D. (2005) *Katrina state of emergency*. Kansas City, MO: Lionheart
- Reyer, C. P. O., Adams, S., Albrecht, T., Baarsch, F., Boit, A., Canales Trujillo, N., Carlsburg, M., Coumou, D., Eden, A., Fernandes, E., Langerwisch, F., Marcus, R., Mengel, M., Mira-Salama, D., Perette, M., Perezniето, P., Rammig, A., Reinhardt, J., Robinson, A., ... Thonicke, K. (2017). Climate change impacts in Latin America and the Caribbean and their implications for development. *Regional Environmental Change*, 17(6), 1601–1621. <https://doi.org/10.1007/s10113-015-0854-6>
- Rivera, J.D. & Miller, D.S., (2006) "A brief history of the evolution of United States' natural disaster policy." *Journal of Public Management & Social Policy*, Vol. 12 No. 1
- Rivera, J.D. & Miller, D.S. (2007) "Continually Neglected: Situating Natural Disasters in the

- African American Experience.” *Journal of Black Studies*, Vol. 37 No. 4
<https://doi.org/10.1177/0021934706296190>
- Salinas, V. (2013). *La Vulnerabilidad de las Comunidades Afro y Chachis frente al Cambio Climático: Una Mirada desde la Representaciones y Prácticas frente a las Inundaciones*. Facultad Latinoamericana de Ciencias Sociales Sede Ecuador.
- Salinas, V., Cevallos, W., Levy, K. (2019). Afrodescendientes e indígenas vulnerables al cambio climático: Desacuerdos frente a medidas preventivas estatales ecuatorianas. *Íconos - Revista de Ciencias Sociales*, 66, 107–129.
<https://doi.org/10.17141/iconos.66.2020.4012>
- Sattherthwaite, D., Huq, S., Reid, H., Pelling, M., & Lankao, P. R. (2007). *Adapting to climate change in urban areas: The possibilities and constraints in low and middle income nations*. <https://pubs.iied.org/10549IIED/>
- Schlosberg, D., & Collins, L. B. (2014). From environmental to climate justice: Climate change and the discourse of environmental justice: Climate change and the discourse of environmental justice. *Wiley Interdisciplinary Reviews: Climate Change*, 5(3), 359–374. <https://doi.org/10.1002/wcc.275>
- Secretariat for Natural Resources and Environment of Honduras. (2019). *Salvaguarda Cultural Indígena y Afrodescendiente en el marco de REDD+—UN-REDD Programme Collaborative Online Workspace*.
<https://www.unredd.net/documents/global-programme-191/safeguards-multiple-benefits-297/17306--2.html>
- Sherman, A., & Shapiro, I. (2005). *Essential facts about the victims of Hurricane Katrina*. Washington, DC: Center on Budget and Policy Priorities
- Shirane, D. (2011). *ICERD and CERD: A Guide to Civil Society Actors*. International Movement Against All Forms of Discrimination and Racism (IMADR).
- Simon, P. (2012). Collecting ethnic statistics in Europe: A review. *Ethnic and Racial Studies*, 35(8), 1366–1391. <https://doi.org/10.1080/01419870.2011.607507>
- Siraj, A. S., Santos-Vega, M., Bouma, M. J., Yadeta, D., Ruiz Carrascal, D., & Pascual, M. (2014). Altitudinal changes in malaria incidence in highlands of Ethiopia and Colombia. *Science (New York, N.Y.)*, 343(6175), 1154–1158.
<https://doi.org/10.1126/science.1244325>
- Small, S. (2018). Theorizing visibility and vulnerability in Black Europe and the African diaspora. *Ethnic and Racial Studies*, 41(6), 1182–1197.
<https://doi.org/10.1080/01419870.2018.1417619>
- Stojanov *et al.* (2017) “Local perceptions of climate change impacts and migration patterns in Malé, Maldives” in *The Geographical Journal* Vol. 183 No. 4
- Sze, J., Gambirazzio, G., Karner, A., Rowan, D., London, J., & Niemeier, D. (2009). Best in Show? Climate and Environmental Justice Policy in California. *Environmental Justice*, 2(4), 179–184. <https://doi.org/10.1089/env.2009.0028>
- Taylor, D. E. (2000). The Rise of the Environmental Justice Paradigm—Injustice Framing and the Social Construction of Environmental Discourses. *American Behavioral Scientist*, 43(4), 508–580.
- The Carter Center. (2017). *The Right to Participate in Public Affairs*. The Carter Center.
<https://www.ohchr.org/Documents/Issues/EqualParticipation/DraftGuidelines/CarterCenter.pdf>
- The Rapoport Delegation on Afro-Ecuadorian Land Rights. (2009). *Forgotten Territories, Unrealized Rights: Rural Afro-Ecuadorians and their Fight for Land, Equality, and Security* (pp. 1–60). The Bernard and Audre Rapoport Center for Human Rights and Justice.
- Thomas, K., Hardy, R. D., Lazrus, H., Mendez, M., Orlove, B., Rivera-Collazo, I., Roberts, J. T., Rockman, M., Warner, B. P., & Winthrop, R. (2019). Explaining differential vulnerability to climate change: A social science review. *Wiley Interdisciplinary Reviews: Climate Change*, 10(2). <https://doi.org/10.1002/wcc.565>
- Treaster, Joseph B. (2005). “Superdome: Haven Quickly Becomes an Ordeal”. *New*

- York Times* (Sept. 1, 2005)
<https://www.nytimes.com/2005/09/01/us/nationalspecial/superdome-haven-quicklybecomes-an-ordeal.html>
- UN. (1948). *Universal Declaration of Human Rights*. United Nations.
<https://www.un.org/en/universal-declaration-human-rights/index.html>
- UN. (2014). *International Decade for Action 'Water for Life' 2005-2015*. United Nations.
https://www.un.org/waterforlifedecade/human_right_to_water.shtml
- UNESCO. (2019, November 18). *Right to participate in cultural life*. UNESCO.
<https://en.unesco.org/human-rights/cultural-life>
- UNESCO. (2020, November 26). *What you need to know about the right to education*. UNESCO. <https://en.unesco.org/news/what-you-need-know-about-right-education>
- United Nations. (1966). *International Covenant on Economic, Social and Cultural Rights*. United Nations. <https://www.ohchr.org/EN/ProfessionalInterest/Pages/CESCR.aspx>
- United Nations (2013) *General Assembly Resolution A/RES/68/237 Proclamation of the International Decade for People of African Descent*
<http://undocs.org/A/RES/68/237>
- Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean, (2020).
https://treaties.un.org/pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-18&chapter=27&clang=_en
- United Nations Human Settlements Programme (Ed.). (2010). *Climate change assessment for Esmeraldas: A summary*. UN HABITAT.
- UN-Water. (2020). *Human Rights to Water and Sanitation*. UN-Water.
<https://www.unwater.org/water-facts/human-rights/>
- U.S. Census Bureau. (2020, October). *U.S. Census Bureau QuickFacts: California*. U.S. Census Bureau. <https://www.census.gov/quickfacts/fact/dashboard/CA/RHI225219>
- Wander, M. (2020, October). *Interview with Madeline Wander* [Personal communication].
- White, I. K., Philpot, T. S., Wylie, K., & McGowen E. (2007) "Feeling the Pain of My People: Hurricane Katrina, Racial Inequality, and the Psyche of Black America." *Journal of Black Studies* Vol. 37 No. 4 (March 2007) doi: 10.1177/0021934706296191
- White-Newsome, J. L. (2016). A Policy Approach Toward Climate Justice. *The Black Scholar*, 46(3), 12–26. <https://doi.org/10.1080/00064246.2016.1188353>
- Winchester, L., & Szalachman, R. (n.d.). *The Urban Poor's Vulnerability to Climate Change in Latin America and the Caribbean*. 25.

Appendix A: Definition of Human Rights

Right to health: According to the UDHR, the article 25 defines the right to health as the following: “Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services” (UN, 1948). States have the responsibilities to entitle an equal access to a system of health for everyone (OHCHR and WHO, 2008).

Right to life: The article 3 of the UDHR states that “everyone has the right to life, liberty and security of person” (UN, 1948). This right must be guarantee without any distinction or discrimination. People must also have access to an equal and effective access to reparations for the violation of the right to life (OHCHR, 2020a).

Right to adequate food: The right to food is defined as fully realized “when every man, woman and child, alone or in community with others, has the physical and economic access at all times to adequate food or means for its procurement” (OHCHR, 2020c). The right is inscribed in the article 25 (1) of the UDHR and the article 11 ICESCR (OHCHR, 2020b).

Right to water and sanitation: Since the adoption of the UN General Assembly resolution 64/292 in 2010, States recognize “the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights” (UN, 2014). The right to water guarantees that “everyone has access to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic use” (UN-Water, 2020).

Right to adequate housing: The right to housing entitles everyone access to adequate housing, that is to live somewhere in security, peace, and dignity. An adequate housing includes the security of tenure, an equal and non-discriminatory access to housing, the participation in decision-making process on housing questions, and the habitability of housing (physical safety, adequate space, and protection against threats to health and structural hazards) (OHCHR and UN-Habitat, 2014).

Right to education: The right to education is guaranteed in the article 26 of the UDHR. It specifies that primary education must be free, compulsory and universal, technical and professional education should be generally available, and a higher education accessible to all and progressively free. Moreover, education should reinforce the “respect for human rights and fundamental freedoms.” (UN, 1948; UNESCO, 2020).

Right to work: This right is protected under article 23 of the UDHR which states that “everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment.” (UN, 1948). In addition, the article 6 of the ICCPR mentions that members-States have to ensure the enjoyment of this right through policies, training programs, technical and vocational guidance (United Nations, 1966).

Right to participate in public affairs: The right to participate in public affairs is codified in the article 21 of the UDHR. While international law instruments provide a broad range of guidelines to favore political participation, the article 25 of the ICCPR presents guidelines that mention the right of citizens to participate through voting, debate and dialogue, consultative process, etc. Inclusive and non-discriminatory principles should also guide the right to

participate in public affairs, which include special measures to encourage their equal participation of racial minorities (The Carter Center, 2017).

Right to culture: The right to culture is protected under the article 27 of the UDHR: “Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.” (UN, 1948). It means that people must participate and have access to culture, cultural heritage, and cultural expressions. To ensure the enjoyment of this right, measures on conservation, development and diffusion of culture should be taken (UNESCO, 2019).

Appendix B: Tables

Table 1: Case study selection

| N | Case Study | Region | Climate impact | Climate mitigation policy | Climate adaptation policy | Status | Court case | Urban / rural | Relevance | Available data | Right affected |
|---|------------------------------------------------------------------|---------------|----------------|---------------------------|---------------------------|------------|------------|---------------|-----------|----------------|-----------------------------------------------------------------------------------|
| 1 | Hurricane Katrina in US | North America | x | | | Historical | | Urban | High | High | Right to life, Right to housing |
| 2 | Climate change impacts on Afro-descendant communities in Ecuador | Latin America | x | | x | Historical | | Rural | High | Low | Right to health, right to life, right to adequate housing, right to participation |
| 3 | California Cap-and-Trade System | North America | | x | | Current | | Urban | | High | Right to health, Right to Life |
| 4 | Biofuel policies in Colombia | Latin America | | x | | Current | x | Rural | High | High | Right to land, Indigenous rights |

Table 2: Interviewees per case study

| Case Study | Interviewee 1 | Interviewee 2 | Interviewee 3 | Interviewee 4 |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Hurricane Katrina in US | Jason Rivera - academic researcher and expert on disaster response, emergency & recovery management planning | John J. Kiefer - professor at the University of New Orleans and expert on hazard policy & disaster resilience | - | - |
| Climate change impacts on Afro-descendant communities in Ecuador | Victoria Salinas - academic researcher | Byron Real - lawyer and anthropologist | Isabel Padilla - coordinator of a local social ministry office | Julianne Hazelwood - academic researcher in human geography |
| California Cap-and-Trade System in US | Madeline Wander - academic researcher | Ethan Elkind - climate and environmental law expert | Gladys Limon - executive director of California Environmental Justice Alliance | Martha Dina Arguello - executive director of Physicians for Social Responsibility LA |
| Biofuel policies in Colombia | Victoria Marin Burgos, academic researcher and independent consultant | Nazaret Castro, journalist | Victor Abramovich, professor and former Commissioner for Inter-American Court of Human Rights (IACHR) | - |

Table 3: Case studies rights comparison

| | Hurricane Katrina | Cap & Trade | Colombia | Ecuador |
|------------------------|-------------------|-------------|----------|---------|
| Right to health | X | X | X | X |
| Right to housing | X | X | X | X |
| Right to life | | X | X | |
| Right to land | | | X | X |
| Right to food | X | | X | X |
| Right to water | | | X | |
| Right to participation | | X | | X |
| Right to culture | | | X | X |
| Right to education | X | | | |
| Right to work | X | | | |
| Women's rights | | | X | |