

Resource, Policy, and Conflict
Case Study of the Senegal River Valley

by

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Case Study of the Senegal River Valley

A thesis submitted in partial fulfillment of the degree of Master of Science at George Mason University, and the degree of Master of Arts at the University of Malta

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Abstract

This thesis examines the 1989 conflict between Senegal and Mauritania. Through rigorous process tracing, this research unpacks the causal mechanism that impacted cycles of peace and conflict in the Senegal River Valley between 1960 and 1989. This dissertation addresses the governmental response to environmental scarcity as a cause of social conflicts exacerbated by rainfall deviation from mean rainfall. In contrast with much of the research written on the 1989 Senegal Mauritania conflict, this paper connects different aspects of the environmental and social dynamics as they lead to conflict and to violence. With much of the research in the impacts of water conflicts done on an international scale, this thesis focuses on the sub-national context. Using research on rainfall deviations and the propensity for conflict, this thesis examines the connection between historic social dynamics and identity formation to climate variability. The result is a take on a historic conflict that combines environmental research and social conflict theory. As this thesis demonstrates, the 1989 conflict was an ecologically driven conflict that developed out of intra-national, inter-ethnic conflict based on government-induced asymmetric, ethnic distribution of scarce, renewable resources. The Beidan elites in the Mauritanian government perpetuated their hegemonic rule through institutionalized despotism and a patronage system. They eliminated traditional resource management strategies and created disincentives for common peace. Escalatory factors on the latent social effects of ecological disaster in Mauritania culminated in the eruption of international, violent conflict with Senegal based on the cross-national affinity of the Hal-Puular ethnic group. The propensity for violence in the intra-national conflict in Mauritania was increased by several escalatory factors including a history of identity-based grievances, perceptions of simple scarcity/zero-sum conflict, scale, and rainfall deviation from the mean. By looking at this historic conflict, I demonstrate the robust relationship between environmental change, exclusionary resource policies, and social conflict.

Dedication

To the village of Amarabe, Senegal for inspiring me to be better.

To Etienne Senghor who encouraged me to pursue this degree in preparation for the future.

To my teammates at BJJ Team Malta who made me laugh, put me through insane workouts, and gave me all the bruises and black eyes that made for funny conversation pieces.

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Chapter 1: Introduction

After many years of simmering tensions, conflict between Senegal and Mauritania erupted into the open in 1989; the neighboring countries closed their borders and severed diplomatic relations. The breaking of ties followed border conflicts fueled by Mauritanian, Beidan herders, violating agreements about timely access to grazing lands and by the *cross-national affinity*¹ of the Hal-Pulaar ethnic² groups.

On *Black Friday*, Friday the 25th of April 1989, “hundreds of Senegalese and other black-Africans were chased and killed, and many more wounded, prompting a mass exodus of refugees” (Parker). The Mauritania army was called out and a curfew imposed⁶. The victims of violence and other black Africans fled south to Senegal under threat of violence and the perception that it would continue. A number of these refugees fled from the capital city of Nouakchott, Mauritania and from the border region between the two countries. The border between Senegal and Mauritania is the center line of the Senegal river. This day saw at least 40 people massacred, with some estimates as high as 200 dead and 700 people injured ((Sy and Tall 1989, p. 8) in Parker et. al). The Mauritanian government refused to let any officials (international, Senegalese, or otherwise) make an official count and many of the dead were merely buried in mass graves (Parker et. al.).

Beidan people are light skinned nomadic peoples of the Mauritanian hinterland who draw their heritage from Sanhaja Berbers and Bedouin Arabs who conquered West Africa in the 7th

¹ Cross national affinity is the affiliation within the country by an outside group or nation whereby the outside group or nation acts for the sake of "their people."

² Ethnicity is “any subjectively experienced sense of communality based on the belief in common ancestry and shared culture.” Ethnic groups are real and imagined, regionally bound and morally entities. (Cederman et. al)

⁶ At this date the Mauritanian army was majority is not completely consistent of ethnically Beidan soldiers as a result of a 1987 movement by the Mauritania government to remove black Mauritians from public office and from military services.

century CE. The Hal-Pulaars, on the other hand, are a black, sub-Saharan, West African group, whose traditional lands were divided by the nation-building processes at decolonization, creating Senegalese Hal-Pulaar and Mauritania Hal-Pulaar identities. The Hal-Pulaars claim to be traditionally Senegalese and live on both sides of river, unless forced to do otherwise, disregarding the legal border (Nicoja). Clashes along the border between Mauritanian Hal-Pulaars and Haratins, Hal-Pulaars and Beidan, and Beidan and Haratins grew into the events of *Black Friday* and the *Mauritanian Hunt*. Haratins are class of Arabic-speaking black Africans who were captured, enslaved, and assimilated into the Beidan peoples' caste structure prior to the French entrance into West Africa.

On April 27th to the 29th 1989, The *Mauritania Hunt* was commenced by Senegalese nationals in a retaliation. The period resulted in the death of some 50 Mauritians at the hands of Senegalese nationals within the borders of Senegal. Violence peaked "on the night of April 28, in which at least 35 people were killed (estimates suggest as many as 100 ethnically Beidan, Mauritanian nationals may have been killed) and some 40,000 Beidan shops were pillaged" (Parker et. al). Thousands of Beidan subsequently fled north into Mauritania. These events left thousands of refugees huddled in camps along the border on either side. The number and frequency of incidents of violence increased in Mauritania as Beidan had tended to explain the happenings of the *Mauritania Hunt* as the result of systematically racist policy in Senegal and used this as justification for continued action against black Mauritians (Parker et. al.). Several hundred thousand people were relocated in 1989 as a result of these events. The pinnacle of the 1989 Senegal Mauritania conflict, these events, *Black Friday* and *The Mauritanian Hunt*, were but a shade of violence that occurred.

Intra-national violence in Mauritania had gone unheeded by the world despite manifestos aimed at exposing the nature of government sponsored inter-racial violence published by black Mauritanian academics in Mauritania. The first manifesto, published in 1957, was on the French-Maure⁷ collusion in the negotiation of the terms for the formation of the soon-to-be nation-state of Mauritania; the nation-state was officially created in 1960 when the French decolonized West Africa. The 1957 manifesto protested against the terms for the nation-state on the grounds that it created second-class citizenship for the black Mauritania population (Parker et. al). The constitution that was being built was argued by the blacks Mauritanian Academics as being “obviously racist” (Parker et. al) and that it advocated for the racial dominance of Beidan groups in Mauritania.

The second manifesto, published in 1986, was entitled the *Le manifeste du negro-mauritanien opprime* (the Manifesto of the Oppressed Black Mauritanian). The manifesto called for violent resistance to the land seizure and sale by Maure merchants, in the Senegal River Valley following a series of land tenure policy changes in early 1980s. The land seizure and sale were contemporary to the completion of the large water infrastructure projects, the Diam Dam and the Manantali Dam (see Map 1 Senegal River Drainage Basin). The manifesto was met with arrests, torture, and trial of the collaborating black Mauritanian intellectuals, who had authored it, by Mauritanian government officials. In total twenty-two were arrested, convicted and sentenced in March and April of 1987 (Parker et. al.). The government at this time was control by Beidan ethnic group. The Diam Dam is located at the mouth of the Senegal River near the colonial capital of St. Louis. It is mean to block salt water intrusion⁸ into the Senegal River. Salt water intrusion creates brackish water that is unsuitable for consumption, sanitation, agriculture,

⁷ Maure here is referring to people of Arab-Moor descendent or the ethnically Beidan.

⁸ Salt water Intrusion -

etc. The Manantali Dam is located on the Bafing River a tributary of Senegal River that flows through Mali. The Manantali Dam regulates the seasonal flows of the Senegal River by harnessing a measure of rainy season flood waters and storing it in its reservoir. While regulating the rainy season flow to some degree, the dam still allows flows to pass in excess to permit flooding and recessional agriculture practices. The reserved water, stored in the reservoir, is released during periods of low rainfall to enable the continued agriculture on times of drought. Together the dams provide water supply, power generation through hydroelectric component, navigable waterways, flood protection, and potential for increased food security. The dam project increased the prospect of irrigation development schemes in the Senegal River Valley. The regulated flows stood to increase the production capacity of land by artificially increasing *green water resource*⁹. Increased production capacity translated to increased, agriculture-based revenue for land-holding persons along the river.

What sparked the explosion of violence between these two countries? Was the conflict based on ethnic tension or on water resource scarcity? What role did environmental scarcity response policy play in exacerbating tension? Answering these questions is the focus of this thesis. Understanding historic case of the 1989 conflict, offers a perspective on intra-state ecologically driven conflicts, which address the social impacts of environmental change, to include identity, and that evolve into international affairs. This is particularly important as the world faces issues of climate change and increased resource scarcity, both natural and human driven.

⁹ Green water is the water held in the soil for use by plants. It is the largest fresh water resource but can only be used in situ, by plants. Green water is managed by farmers, foresters, and pasture or rangeland users.

Amnesty international published successive reports in 1989¹⁰ and 1990¹¹ on the numerous human rights violations in Mauritania that had been occurring prior and contemporary to *Black Friday* and the *Mauritanian Hunt*. The first published in 1989 chronicles the three years prior to the crisis in which black Mauritians extrajudicial killings, arbitrary arrest and detention, abuses against women, and indirect expulsions. The second of these publications details human rights abuses against the Hal-Pulaar ethnic group the including arrest, torture, unfair trials, and killings perpetrated by Mauritanian officials, security forces and Haratin militias. The articles to which Amnesty International found Mauritania to be in violation of are listed in Appendix A¹².

To add insult to injury, West Africa was recovering from successive droughts in 1968-1973, 1976, and 1982-1984 (Coupe 1990). Rainfall is a great part of the agricultural economy of Mauritania and as a renewable resource has special status. Renewable resources in general are less-substitutable than non-renewable resources (Libiszewski). In the case of water there is no substitute at all; water is essential to human life. Erratic rainfall places pressure on society, agriculture and economy.

¹⁰ 1986-1989: *Background to a Crisis Three Years of Political Imprisonment, Torture and Unfair Trials*. Amnesty International, Nov. 1989. AFR 38/13/89. And "Mauritania: Human Rights Violations in the Senegal River Valley." *Amnesty International*, <https://www.amnesty.org/en/documents/afr38/010/1990/en/>. Accessed 18 Nov. 2021. The reports state that "The targets of government forces and the Haratin militia (Haratins are descendants of freed black slaves who share the language and culture of the Moors or Beidane) are black African villagers belonging in particular to the "Hal-pulaar" ethnolinguistic group (those who speak Pulaar, the Peul language)" ("Mauritania"). The list of offenses by Mauritanian officials, Haratin military and civilians was add to in *Human Rights Watch Africa* publication which includes extrajudicial killings, arbitrary arrest and detention, abuses against women, and indirect expulsions (Gerhart).

¹¹ "Mauritania: Human Rights Violations in the Senegal River Valley." *Amnesty International*, <https://www.amnesty.org/en/documents/afr38/010/1990/en/>. Accessed 18 Nov. 2021. An alarming level of human rights abuses against members of the "Hal- pulaar" ethnic group is being reported from the south of Mauritania. The army, security forces and the Haratin militia appear to arrest, torture and kill unarmed villagers without any fear of disciplinary action or legal proceedings. Hundreds of black Mauritians have been arrested, [...]

¹² Mauritania, however, was not party to any human rights treaties at the time in which these events occurred but they were still held accountable by the international community for their actions via economic means. Furthermore, it was suggested to oppose loans to the country until such a point that the human rights abuses could be investigated fully. This suggestion exempt loans that went towards providing for basic human needs of the Mauritanian people (Gerhart). The suggestion while valid did not provide a legal definition for "basic human needs" and therefore left much ambiguity in what loans could or could not be exempt.

Following the successive droughts, the entire country of Mauritania was declared a disaster area in 1983 (Seddon) and international aid was requested. The droughts had brought on acute issues of inadequate access to *green water* resources, as well as *blue water resources*¹³. Thousands of people were internally displaced by the ecological disaster. Environmental refugees left their native homelands and way of life to seek opportunity and security in urban centers. Their migration to cities increases competition for jobs, housing and other resources while also increasing pressure on the government to supply basic services. This shift in population density changed the rural-urban food supply chain by increasing demand for food products in cities placing stress on rural suppliers and increasing

The agriculturally based economy suffered greatly and induced latent social impacts as environmental issues impacted society. The inadequate access to water resource impacted agricultural output contributing to the economic decline of the agricultural-based economy of Mauritania. The continued lack of rainfall decreased the production capacity of the land, or how much the land was able to produce. The limited capacity reduced the carrying capacity of the land effectively reducing the number of animals and humans that could survive off of the land. Decreased plant matter, increased demand for produce. Increased demand for produce, increased competition for resources. Increased competition for resources, in areas of concentrated rainfall, increased the propensity for skirmishes between the competing consumers.

¹³ Blue water is the water from the surface and ground water. Blue water is paramount in agriculture due to its role in irrigation.



Map 1: Senegal River Drainage Basin

Through studying the case of the 1989 Senegal Mauritania Conflict valuable insight into the social impacts of environmental effects and social impacts to conflict become more apparent. According to Homer-Dixon a leader in environmental scarcity research, “of the major environmental changes facing humankind, degradation and depletion of agricultural land, forests, water, and fish will contribute more to social turmoil in coming decades than will climate change or ozone depletion” (Homer-Dixon 101). Vast populations are already suffering especially among those in poor societies, like Mauritania because these societies, by definition, lack the infrastructure and resources in order to meet the basic needs of those who live there.

Environmental change is further exacerbating those effects and contributing to the feedback loops and shifting underlying causes of conflict. Environmental scarcity conflicts are not simple conflicts. A mixture of historical relationships, race, ethnicity, and identity factors evolve and these intra-national conflicts can evolve into international conflicts. While the 1989

conflict appeared on the surface to be about ‘land tenure,’ my research points towards deeper issues impacting on the outbreak of conflict. As this dissertation will show, the development of these events and the ensuing violence, was the result of a historic differentiation of ethnic groups, which enabled the asymmetric and ethnic distribution of resources that was tipped by shift in rainfall deviation in West Africa.

According to Hendrix and Salehyan, rainfall patterns – which are linked to droughts and floods - affect political behavior and the propensity of individuals and groups to engage in disruptive activities such as demonstrations, riots, strikes, communal conflict, and anti-governmental violence” (Hendrix and Salehyan 36). Deviations in rainfall from the mean increase the propensity of individuals and groups to engage in conflict and violence. The deviations in rainfall are then intrinsically linked to cycles of conflict and by examining the historic events, the present and future triggers of conflict will become clearer. In addressing this environmentally driven conflict, I will be highlighting the connections between social impacts of environmental change and social impacts and conflict.

Principally, I will establish a timeline of internal political dynamics and relative power dynamics of Mauritania to address historically rooted interaction between ethnic groups contributing to inter-group ethnic tensions. This will address the distribution of coercive power, perceptions of political stability, and form and effectiveness of institutional governance. Next, I will assess effects of rainfall deviation to include the decline in agricultural production and economic decline followed by population displacement and disrupted social relations by looking a family and community structure. Then, I will address the Mauritanian government’s disruption of the chronology of use of green water resources and elimination of traditional use systems of use which shifted perceptions of governance and reinforced negative confidence in governance. In this

I address the intervening factors of land distribution, economic and legal incentives. I will then analyze the interaction between historically rooted interaction of racial and ethnic groups, rainfall deviations and Mauritania government policy, that addresses environmental change, population growth, and resource distribution, as the hypothesized precipitating cause of conflict. This thesis aims to demonstrate how the environment and social issues are linked utilizing process tracing. To highlight the connectedness of intra-national conflict and environmental scarcity, the next section will engage with the main literatures dealing with identity, scarcity and resource management.

Now that I have introduced the conflict and explained the outline of my research, I will transition into the literature review. In the next chapter, I will examine the frameworks of Horowitz, Gurr, and Mamdani as they apply to the social aspects of the conflict. Then, I will examine research on environmental scarcity before delving deeper into infrastructure and policy, rainfall, and escalatory factors in conflicts.

Chapter 2: Literature Review

It would be wrong to assume that colonialism was the beginning of group divisions and conflict in West Africa. Mauritania is the geographic divide between the Arab-Maghreb and the sub-Saharan West Africa. It has acted as the ethnic buffer between Arab-Berbers and black-Africans that has produced conflict since the fall of the Ghana Empire. A great deal of this conflict has surrounded the creation and maintenance of group identity during multiple power inversion.

The combination of historically rooted interaction, rainfall deviations, scale and government disruption of chronology of resources use, increased the propensity for conflict. This section will explore the major pieces of literature seeking to explain the identity, environment, resources and distribution. In the social conflict theory section, I will first discuss the ethnic groups in conflict utilizing Horowitz's work on ethnic differentiation and social stratification. Secondly, Gurr's framework on relative deprivation and the frustration-aggression. Thirdly, Mamdani's work of institutionalized despotism and the use of law in a bifurcated state. Then in the Environmental Scarcity literature section, I will address the environmental scarcity literature, which links resource scarcity and management to identity and conflict. I will address research into rainfall deviations and social conflict in Africa. Finally, I will address escalatory factors in environmental conflicts.

2.1 Social Conflict Theory

2.1.1 Ethnic Differentiation and Social Stratification

As precursors to the work of Horowitz, Psychologist Leon Festinger and Henry Tajfel lay the basis for the theory of group comparison and social conflict. Festinger points to the human drive to evaluate one's abilities by comparing them with the abilities of others. The comparison is

made, more often, with people that one judges to be relative to one's self. Humans judge the discrepancy in relation to other and then try to reduce the discrepancy through performance improvement or controlling the superior performance of the other(s).

Tajfel in his work describes the human propensity to form groups based on causal difference and then to act in a discriminatory fashion on the basis of the new-found identity as a group member. People of the new group have the propensity to discriminate in favor of members of their group or the ingroup. Ingroup members will discriminate in order to maximize the joint profit of the ingroup and maximize the difference between the profit of the ingroup and the profit of the outgroup¹⁸. In this way, the group develops loyalty amongst the members. The pull of group loyalty leads to the quest for relative ingroup advantage over the outgroup and a willingness to incur personal costs to maximize intergroup differential. These qualities present themselves as groups aim to distinguish themselves from one another on some positive value dimension.

Horowitz combines Festinger's analysis of the human drive to evaluate one's ability with that of someone relative to self and Tajfel's ingroup/outgroup formation and discrimination patterns. Then Horowitz applies them saying, "Colonial rule made it easier to compare group attributes and simultaneously made ethnic identity a more important matter than it might otherwise have been" (Horowitz Ch.4 p 49). He elaborates on the importance of a common sphere of interaction in the colonial process by saying, "for two groups in the same environment, the question of relative group worth is salient and the answer uncertain and in need of authoritative determination by standards of superior third party" (Horowitz Ch. 4 143). Effectively, the worth

¹⁸ In a study done by Tajfel, people "in distributing money between two other people, one from the ingroup and one from the outgroup, the subjects were consistently sacrificing to some extent the advantages of the greater profit in absolute terms for members of their group and a greater profit in absolute terms for all the subjects in order to achieve a *relatively* higher profit for members of their ingroup as compared with members of the outgroup." (Horowitz Ch.4).

of groups when comparing amongst themselves was negligible until a superior party enters, ie. the colonial power. The measures taken to create a central colonial power in regional terms created a common environment. The common environment enables groups to establish relations based on the assignment of relative group worth, or the worth one in comparison to the other, utilizing the standards determined by the 'superior third party'. In this case study there is a dual 'superior third party' due to the double colonization of West Africa. The first colonization was the Arab-Berber wave followed by the French.

Colonial evaluations created racial and ethnic ranking systems for groups' worth based on valuable characteristics. The valuable characteristics were in fact subjective characteristics determined by the colonial power, that were imposed on a group as if they were objective characteristics. Utilizing the common environment, which had cleared the field of other comparisons, colonial powers highlight the subjective characteristics. Employing invidious comparison of groups as either "backward" or "advanced" sharpened group juxtaposition creating division amongst peoples. Divisions were reinforced through differential treatment under the colonial system and institutionalized through colonial policy. The colonial intervention resulted in important legacies of social stratification due to the unequal distribution of colonial opportunity across differentiated groups. Horowitz says "that colonial purposes entailed differential recruitment of ethnic groups into new roles; and that, as a result, new standards of group evaluation emerged that carried over long after the colonial departure" (Horowitz Ch.4 p 49). The carry over after colonial departure can be attributed to the entrenchment of invidious comparisons between groups. Entrench divisions within society were enforced from within the groups' own elites seeking to maximize ingroup out group differential.

Horowitz goes on to explore how colonial powers treated ethnicity unevenly (Horowitz), distributing resources in such a way that it privileged select groups over others. Deemed “backward” or “advanced,” the groups were created by this unequal distribution of opportunity that provided favored groups with greater education, infrastructure and job opportunities. The groups that received these privileges and utilized them were deemed to be of a higher rank and to be more “advanced.” The distribution of opportunity and the lack of uniformity of response led to the creation of ‘backwards’ groups. “Backward” groups may not have been offered privileges or they may have offered and declined to utilize or conform to them. The ability to adapt or not adapt to colonial opportunity played a role. For example, “Backwards” groups often rejected the education and opportunities provided by the European colonizers. In West Africa specifically, this was because the indigenous population was mainly Muslim and colonial education system was provided by Catholic missions.

Through comparison, both intentional and unintentional, the differentiated native groups, according to Horowitz, juxtaposed groups into “backward” and “advanced” groups. Backward groups were disproportionately under-educated and poor, often called traditional, and advanced groups which were disproportionately educated and wealthy called progressive (Horowitz). The result of whatever mix of causal factors is that the ethnic groups are unequally advantaged creating rank amongst them. Differentiated and ranked ethnic groups that emerge from colonialism are the result of ethnic distribution of opportunities through colonial policy, which promoted disparity among ethnic groups.

The impact of these colonial evaluations of the worth of the ethnic groups is important to note as “colonial rule handled ethnicity inconsistently and unevenly” (Horowitz). Groups were chosen by the colonial government to be successful based on their ethnicity. Advanced groups

were held to a higher standard. They received European privileges such as citizenship, education, and greater employment opportunities. These privileges were elevating factors for individuals in society, allowing them greater access to the colonizer's society. While intentional aspects of privilege come into play in the creation of advanced and backward, there are also unintentional aspects.

Contributing to the differentiation of groups, distribution of infrastructure and opportunity was not uniform or equal. The groups did not receive the same privileges or access to European standards. For instance, a group's location - near the colonial capital, harbor or natural resource that was to be exploited – determined their access to opportunity (Horowitz Ch. 4). For instance, living in a highly productive river valley with access to inland ports and being part of ethnic group that traditionally farmed exportable agricultural products that could contribute to the colonial economy, was privileging. Contrarily, if living in an unproductive area or being part of an ethnic group that did not engage in an economic activity that contributed to the colonial economy, like pastoralism, one would be less privileged.

Perceptions of 'other' developed amongst colonially differentiated groups creating animosity and fear. While "advanced" groups received encouragement, "backwards" groups were made to feel at a competitive disadvantage in comparison to "advanced" groups. Feeling weak and helpless, "backward" groups had to catch up to the "advanced" group and if they could not, then their group would fall away and become extinct. This juxtaposition often went hand in hand with social conflict, as 'backward' groups feared continuously for themselves and their existence. This contributes to what Volkan calls "fear of dying off." To conceive of this in another way: if a group cannot compete they will be overcome or will die out (Horowitz ch.4).

This anxiety-laden perception limited and modified perceptions creating extreme reactions to modest threats and contributed to self-esteem to prejudices.¹⁹

French colonial administration had a mixed effect on the cohesion of ethnic groups during colonialism more so than other colonizing groups. The colonialist in general, “sorted out the peoples being ruled and centralized groups that had formerly had formerly been scattered, simultaneously clarifying and strengthening previously murky ethnic affiliation” (Horowitz ch.4 151). In other words, colonial rulers developed ruling techniques specific to an ethnic group, ruling different groups along different lines. West Africa faced two waves of empirical subjugation and identity manipulation. The first wave was the Arab which resulted in racial ranking of groups in a caste system. Subsequently, the French entrance and colonization provided further ethnic ranking of groups and contributed to group differentiation.

These ideas of backward and advanced groups received mixed reviews from the colonizers. Backward groups were considered authentic whereas the advanced groups would have been considered more intelligent, among other differentiation (Horowitz). This phenomenon, as Horowitz discusses, created and entrenched group worth into the ranking system that was tied to ethnic strangers (the French and other foreigners) and enforced by the ethnic groups’ own elites. The impact of inconsistent and uneven handling of ethnicity under impacted colonial evaluations of the worth of the ethnic groups and is important to note because it influenced internal group sentiment and sentiment in relation to other groups.

The backward groups then felt at a competitive disadvantage to advanced groups leading to feelings of inferiority and fear. This affects the group’s motivation within a society making them feel disadvantaged in society. This discouraged state created a self-fulfilling prophecy: they

¹⁹ Prejudice allows for the release of hostility and reduces anxiety.

felt they could not do well led to them not doing well in society or flourishing given the opportunity at independence. It is also connected with feelings of domination by advanced groups and fear of subversion and what Volkan calls “fear of dying off.” On the other side, this dynamic plays into the feelings of the advanced groups who fear role reversal, should the backward group gain power. Not only were backward groups relatively deprived, but they experienced what Gurr calls relative deprivation whereby groups fear loss.

2.1.2 Relative Deprivation

Relative deprivation is the perception of a person or group of people that what resource they have is less in comparison with other persons or groups of persons (Gurr). It is denoted by the tension that develops from a discrepancy between what should be and what is: the frustration-aggression relationship. It can also mean that a person or group feels that they are not able to achieve what they would have expected in comparison to their peer and in comparison, to what has been achieved by their forefathers in the past. Relative deprivation is tied to value standards²⁰ which “are set by reference to some group or status with which an individual does or is thought to identify” (Gurr *why men rebel* 24) and are individual in that each person comes from a different background.

These values, according to Gurr, are divided into three categories: welfare value, power values, and interpersonal values. Welfare values are values that contribute to the physical wellbeing including a physically good life with physical comforts but also psychological aspects that enable mental ability and contribute to the self-actualization of the individual (Gurr). Power values are values that determine the extent to which one person can influence the actions another

²⁰ Values are the desired events, objects and conditions for which men strive and are the objects of human motivation that are attributable or derived from basic “needs” or “instinct” (Gurr). Value standards are then the base line values that one holds.

or a group with and avoid the interference of others in their own actions (Gurr). These include participation values and security values. Finally, interpersonal expectations is the psychological satisfaction that is sought in non-authoritative interactions with others and include desires for status value, communality and ideational coherence (Gurr). Humans base their expectation on the average of these above value positions.

Expectations are set by the society/culture/environment and are based on norms. The value expectation is the average value position is derived from the experience of the collective and is felt by the individual to be a justifiable value position. The average value positions members of the group deem themselves capable of attaining are the value capabilities. Whereas the value opportunity is the course of action available to attain the value positions. Of the three types of deprivation discussed by Gurr, decremental deprivation, aspirational deprivation, and progressive deprivation, decremental deprivation is the most salient in this case study. deprivation is typically found in traditional societies and is marked by relatively static value expectation and is the result of perceived or actual decline in the value capabilities of the group. The end result is the decline in value position.

In application, the salience of ethnocultural identity, differentiation and discrimination creates the impetus for conflict. Fear of future loss, or fear of status reversals, coupled with anxieties based on past discrimination or losses, become collective incentives for political actions. Such actions are shaped by perceptions of collective disadvantages, loss of political autonomy, repression or other frames for action. Group capacity for action, when groups are incentivized to act, is increased with geographic concentration, especially prior to the advent of global communications, and prior organization (Gurr). The opportunity to engage in conflict is increased when a group has the ability to attain their objectives, especially in the political sphere.

This achievement of group goals, often disadvantages counter groups and causes new perceptions of relative deprivation. This idea of group deprivation is often a side effect of state power consolidation through democratization and nationalization. Once ethnic polarity has been achieved, democracy may act as a vehicle to achieve an ethnic bureaucracy, and consequently renewed cycles of ethnic anxiety and conflict (LEC 35). This plays a large role in the willingness of groups to engage in conflict most notably because many of these discriminations and privileges were enshrined in law and carried over after colonialism ended.

2.1.3 Institutionalization of discrimination

As the previous discussion has highlighted, feelings of ethnic exclusion are at the center of what motivates groups towards conflict. However, it remains unclear as to why group identity became political to begin with. The beginning of history in Africa began long before the colonial and the identity of people is imbedded in this historical process. Colonialism however “breathed ‘tribe’ into life by utilizing the legal institution of the colonial state to frame it as a political identity... this historicized race and ethnicity as political identities undergirded and reproduced by institution of colonial vintage” (Mamdani 20). The legacy of this institutional legacy of tribalization lives on as an expression of cultural unity.

When law recognizes a person as part of an ethnic group and precedes to treat them as such then, that person becomes legally and institutionally part of that ethnic group. Law creates race and ethnicity as political identities, legally inscribed and enforced, they shape a person’s relationship to the state and to one another through the state (Mamdani). According to Mamdani, “political identities need to be understood in relation to the process of state formation” (Mamdani 23). The common cultural community, signifying a common past and common historical inheritance, evolves into a common political identity and the existence of a common project for

the future, and this is embedded within state structures, since it is legal structures that tie identity to resource expectations.

Through the process of ‘civilizing’, native populations were introduced to European law. The European law system, set colonizer apart from the colonized and further differentiated legally between groups of colonized people (Mamdani). Through indirect rule colonizers generated race-based political identities (settler and native) and racially separated native and non-natives via civil law. Indirect rule mitigated the settle native dialog by fracturing the race consciousness of native into multiple and separate ethnic consciousnesses. Indirect law while also utilizing native and non-natives it also divided natives into separate groups and governed each through different “customary” laws. Customary law was executed via native authority in the home area of the native group and was meant to fracture the native population into different ethnicized groups based on race and ethnic distinctions. Non-natives and indigenous were separated from each other and indigenous was further separated into ethnic groups (Mamdani). The result is the combination of the direct rule in the civic sphere and indirect rule in the customary sphere or what Mamdani calls a bifurcated system.

The privilege or discrimination of different ethnic and racial groups by law, endowing groups with privileges or discriminating against them, and tying their identity to expectations of resources and land was the backbone of colonialism (Mamdani). For instance, francophone black Africans in Mauritania came to expect greater access to schools and to employment in colonial institutions, whereas Beidan communities were relegated to the ‘native’ sphere, and left to administer themselves, completely excluded from the colonial civic sphere.

Institutionalized discrimination via in-direct and direct rule privileged ‘ethnic’ identity above all, linking identity to territory and to resources expectations. Once ethnic identities

become polarized the legitimization of the state becomes the means through which an ethnic group establishes power. An ethnic group that has power only if members of their group control the state. Political identity is defined by running the states and “nationalist politics is based on who is in and who is out” (LEC 34). This leads to a sort of ‘categorical inequality,’ as argued by Tilly (1999 p172 in LEC 34) and creates a basis for prioritization of one’s own ethnic group and the exclusion of other ethnic groups by the ethnic group in power.

By the time a country becomes a state, ethnic groups find themselves in radically in different power positions based on various historic reasons. “Whereas some ethnic groups came out on top in the geopolitical game, others were conquered and colonized early on and therefore lost out in the competition for wealth and influence” (LEC 35). The ethnic groups fight for control of the state especially in democracies. This leads to status reversals like the ones we saw occur in Mauritania on the eve of independence. The state becomes the vehicle through which ethnicity establishes itself and the result is horizontal inequalities. Ethnic groups vie for control of the state and control of resources. As such, resources policy, management and scarcity play a large role in understanding conflicts.

2.2 Environmental Scarcity

Research into resource scarcity, and its impact on the environment, economic, and social spheres, is a growing field. Major findings in the field of resource scarcity link resources scarcity on a global scale via interstate conflicts (Daley)(Evans)(Matthew), explore the close relationship between resources scarcity and poverty (Daley), climate change and resources scarcity (Pricoli and Wolf)(Ani)(Swain), and most importantly for this thesis, between resource scarcity and identity conflicts (Dixon1991)(Magistro and Lo)(Michel). Further, the link between resource scarcity and conflict is also a well-established one.

Resources scarcity, as presented by Daley, includes the absolute scarcity of resources, increasing consumption of resources, uneven distribution of resources and uneven access to resources (Daley). This aligns closely with Homer-Dixon's ideas of environmental scarcity in which they pose environmental change, population growth and unequal distribution of resources as the primary sources of environmental scarcity (Homer-Dixon 1994). Both of these authors are, however, addressing the decline in resources and increased usage, pose by Homer-Dixon to be cause by population growth. While Daley differentiates between uneven distribution of resources and uneven access to resources. This is the difference between of the case where resources are not located in where they need to be and the case when people cannot obtain/otherwise use available resources, Homer-Dixon does not make this distinguish in his work which predates that Daley and his definition could be seen to encompass both.

It is precisely the concept of unequal access or distribution of resources that is key to addressing the case study at hand as it combines the literatures of deprivation, institutionalized discrimination, horizontal inequality, identity and resource scarcity. Here, I am combining literatures on social conflict and literature on the environment that do not typically inhabit the same space. The definition of unequal access to resources is the key that bridges the gap between identity/deprivation and resource scarcity.

The unequal access to resources can be in accidental or purposeful. Accidental by way of the natural distribution of resources by nature and purposeful by way of human-induced, asymmetric resources distribution. In the case of Mauritania, there is a combination of both uncontrollable and controllable factors. The successive droughts in 1970s and 1980s were uncontrollable as well as the geographic distribution of rainfall which privileged certain areas to greater green water resources over other areas. In turn the southern region of the country hosts

the Senegal River Basin. This area of the country is privileged to blue water access, water in surface and streams, as well as green water access. as this region traditional hosts higher rainfall. Green water in this region comes from two sources. The first source is rainfall which to some extent is absorbed into the ground. The second source of green water is the yearly flooding that comes with seasonal rains. This flood water over flows the banks of the river carrying nutrient rich sediment and leaving swaths of land covered. The flood waters recede and the water that does return to the river is left to be absorbed in low areas and to evaporated.

The unintentional asymmetric distribution of green water resources and the historic settlement patterns of ethnic Mauritania overlap. The overlap meaning indicates a serendipitous asymmetric distribution of resource between the ethnic groups. The distribute of green water is particularly important because it increases competition and by extension competitive exclusion to land but more specifically to plants that utilize the green water to grow. The country while already divided and socially stratified by regions with different ethnic groups of people tied to those regions and having experienced different levels of development, investment, education and overall opportunity because of its double colonial legacy is further divided by access to resources.

The human distributional component is powerfully constrained by the social structure and the resources access it entails (Homer-Dixon 1991). In addressing the distributional aspects of we have to consider how a society developed. In the case of Mauritania, the development of the country through its double colonialism, developed a stratified society. The ethnic groups of the society, tying back to Lars-Eric Cederman, competed for control of the state to gain power. The power results in more exclusionary and discriminatory policy that contributes to the cementing

of ethnicity and creation of in group out group where individual seeking make relative gains for their ingroup.

Homer-Dixon suggests in his 1991 paper that by addressing intervening factors that it is possible to address the complexity of the “environmental-social” system. The intervening factors suggested by Homer-Dixon are: the patterns of land distribution, family and community structure, economic and legal incentives (property rights and markets), perceptions of political and economic stability, distribution of coercive power, historically rooted interactions with others in society, the form and effectiveness of institutional governance, and the beliefs of relationship between humans and environment. Through addressing these mechanisms one can address and analyze the generation of social friction. Understanding these can then aid policy makers, as “social engineers,” in addressing the social structures, technologies and consumption patterns of a society (Homer Dixon 1991). By addressing the connection between environmental security and political security and avoiding *environmental determinism*³², conflict can be mitigated.

Furthermore, Homer Dixon, in their extensive writing and development of environmental scarcity, connects the social conflict theory to environmental changes. Through their analysis of environmental change, find that a combination of social structures, technologies, and consumption patterns cause social frictions and become mechanism for conflict. Simple scarcity conflict, where zero-sum calculations are made by parties involved, become tied to group identity and relative deprivation conflicts. For this reason, they suggest numerous social factors in addressing what they call the “environmental-social” system. As my empirical chapter will show in detail, it was this combination of urban-rural migrations, displacements, and perceptions

³² Environmental determinism is the study of how the physical environment predisposes societies and states toward particular development trajectories.

of identity-based favoritism and discrimination towards black Mauritians surrounding infrastructure projects that combined to exacerbate group-based anxieties and tensions bring open violence.

2.2.1 Rainfall Deviations and Social Conflict in Africa

Hendrix and Salehyan published *Climate change, rainfall, and social conflict in Africa* in 2012. In this paper they argue that extreme deviations from normal rainfall patterns³⁴ may lead to forms of social and political disorder short of civil war (Hendrix and Salehyan). Through their research they demonstrate the importance of extreme events because societies have developed expectations over time and create strategies for coping. “Deviations from normal rainfall disrupt these expectations and can negatively affect human well-being” (Hendrix and Salehyan p37). This feeds into the frustration aggression model addressed above.

Rainfall deviation lead to the conflict amongst consumers of water, including use for personal health, agricultural, and manufacturers while also contributing to desert encroachment. In conjunction, extreme deviations can lead to price disputes between urban consumer and rural producer over food prices as green water access and land quality shift with the impacts of drought or flood. As land quality and production capacity shift, many people opt to migrate, internally or externally, in search of security. This promotes social tensions between locals and new arrivals as well as between ethnic groups whose settlement patterns have been disrupted. Tensions are cause by increasing competition for housing, jobs, and resources as well as creating strain on the government to supply basic services. Governments often intervene economy in order for officials to maintain positions power and expand patronage opportunities while

³⁴ “While negative rainfall shocks imply reduced water availability, drought, and potential crop failure, extreme positive shocks may be equally disruptive as excess rain can lead to crop damage, flooding, mudslides, and increased water-borne diseases” (Hendrix and Salehyan p37).

increasing revenues. This is especially prominent in agriculture-based economies because volatility of natural disaster has a pronounced effect on public finance. “Moreover, the ability of incumbents to maintain patronage networks and reward core supporters — either through direct transfers or through manipulating markets - can be undermined” (Hendrix and Salehyan p 38). The overarching macro-economic effect of rainfall deviations is the negative affect on overall growth which further contributes to conflict and social disorder.

Hendrix and Salehyan find that when rainfall deviation from the mean in either direct (positive=increased rainfall and negative=decreased rainfall) are associated with increased instances of social conflict. The results are as follows:

“Violent events – such as riots, communal violence, and factional conflict with the government – are more prevalent on abnormally high years of rainfall than abnormally low ones. Non-violent events – such as protests and strikes, are almost twice as sensitive to rainfall scarcity as abundance... Rainfall shocks have roughly equal impacts on government-targeted and non-government-targeted social conflict.” (Hendrix and Salehyan 45).

This indicates that contrary to previous literature, periods of high rain fall increase the probability of violent conflict. Also, the direction of the deviation, flood or drought, does not impact the target of the conflict.

The location of rainfall is connected to changes in violent conflict. The 1989 conflict itself was not over access to land but the access to the green water resources. The real negotiation was not over the land but the water that the land held. The Beidan, living in a dryland system, were dependent rainfall patterns as the main source of water. This is the case with dryland areas which includes rainfed agriculture and rangeland (Anaya). The location of the Black Mauritania groups in the river valley, though close to the river were dependent on rainfed agriculture prior to agro-hydrological development in the river valley.

The international focus on blue water resources as a common incentive for peace falls short of explaining the green water phenomena. While this discussion speaks to the codependency of nations on shared surface water systems, and the appropriation and allocation of water resource, there is a lack of discussion of the repercussion of the lack of green water. Green water resources distribution directly affects the highly agrarian societies of the developing world and it is impacted by intra-national asymmetric power dynamics. The dynamics of green water distribution contributes to the socio-political and economic sphere.

2.2.2 Escalatory factors

Rainfall effects humans on the most basic level, impacts the economy of country, social ties between sections of society. Water is a renewable resource that is not substitutable (Homer-Dixon '99) On a most basic level, the human body consists largely of water and moreover the human life is dependent on water. The water we drink, the food we eat, how we clean ourselves and it even effects how we interact with others. “Individuals and groups may fight directly rather than engage the government” (Hendrix and Salehyan 37), increasing the amount of intergroup and interpersonal conflict around water conflicts. This ties into the findings in Priscooli and Wolf’s *Managing and Transforming Water Conflicts*. The findings state that “as the scale [of the conflict] drops the likelihood and intensity of violence increases” (Priscooli and Wolf 44). In combination, the findings of Hendrix and Salehyan and of Priscooli and Wolf amount to periods of high rainfall increasing the propensity toward violent conflict and small-scale aspect of this intra-national conflict increase the intensity of violent conflict between non-state actors. In which case intra-national conflicts between limited numbers of groups and people, like in the case of inter-ethnic (Hal-Pulaar and Haratine) and interracial (Hal-Pulaar and Haratin or Haratin and Beidan) conflict groups. The contrary to this is the larger the scale the likelihood and

intensity of violence would decrease. The incorporation of Senegal as a country in the dispute decreased intensity of violence. The internationalization of the conflict slowed the escalation of violence. The borders between the countries were closed and remained closed between 1989 and 1992 when the official treaty was signed.

Furthermore, Priscoilli and Wolf point out a few factors that act as mechanism toward conflicts involving water. The first is that, “shifts in demand due to agricultural policy or movements of refugees or immigrants can indicate problems” (Priscoilli and Wolf 45). Secondly the shifting political divisions and relative power dynamics can indicate a non-cooperative setting. Thirdly, the perception of unresolved issues with one’s neighbors is an exacerbating factor. Lastly, notions of security and interdependency are tied to each other in international water sharing systems.

The migration of the environmental refugee population to cities had strained the rural-urban supply chain. The flow of agricultural products already limited from the drought then did not go as far as it would have in the cities because of the increased population density. Additionally, in the post drought period the urban population growth was an indicator of possible social stresses on the population. The relative power dynamics between ruling- majority ethnically Beidan and minority black-Mauritanians would indicate non-cooperation in water sharing and the in-group/out-group perspectives based on righting historic wrongs were leading to conflict within the state.

2.3 Conclusion

To recap, in this chapter I have introduced the core literatures that help explain the theoretical logic underpinning the 1989 Senegal Mauritania conflict. I began with discussing the social conflict theory: ethnic differentiation and social stratification, by Horowitz and moved

into Gurr's relative deprivation and the frustration-aggression model before addressing Mamdani's institutional despotism and link it to Lars-Erik Cederman's work on Stewart's horizontal inequalities where Cederman builds on ethnic exclusion from state power and the bureaucracy. Then, I connect social conflict theories through Homer-Dixon's foundation work on environmental scarcity. This work connects the environmental concept of resource scarcity and with the social aspect of identity-based, asymmetric resource distribution. Finally, I introduce into the conversation two modern pieces. The first a joint research project on rainfall cycle and social conflict that draws its data from the African Continent that finds correlation between rainfall cycle and propensity for violent conflict. The second a broader work by Prisco and Wolf on water conflicts.

The complex interaction between the different literatures can be depicted as follows: At the center of the diagram is Environmental Scarcity. That is surrounded by Homer-Dixon's three main sources for environmental scarcity: environmental change, unequal resource distribution, and population growth. Out from that area series of factors, variables and mechanisms, pertaining to the research and some specifics to the case, that fall into three forms of conflict with overlapping variables: relative deprivation conflicts, group identity conflicts, and ecologically driven conflicts. The aim of the diagram is to demonstrate the complexity of the environmental-social system or connectedness of environmental disaster and social structures that were at play in the development of inter-ethnic, intra-national conflict that led to the 1989 Senegal-Mauritania Conflict. Note that this is not an exhaustive mapping and that it is meant to express broader intervening factors of the case.

In the next chapter, I will outline the methodology of my thesis, the values added of the research to existing research and the logic behind utilizing process tracing as my method.

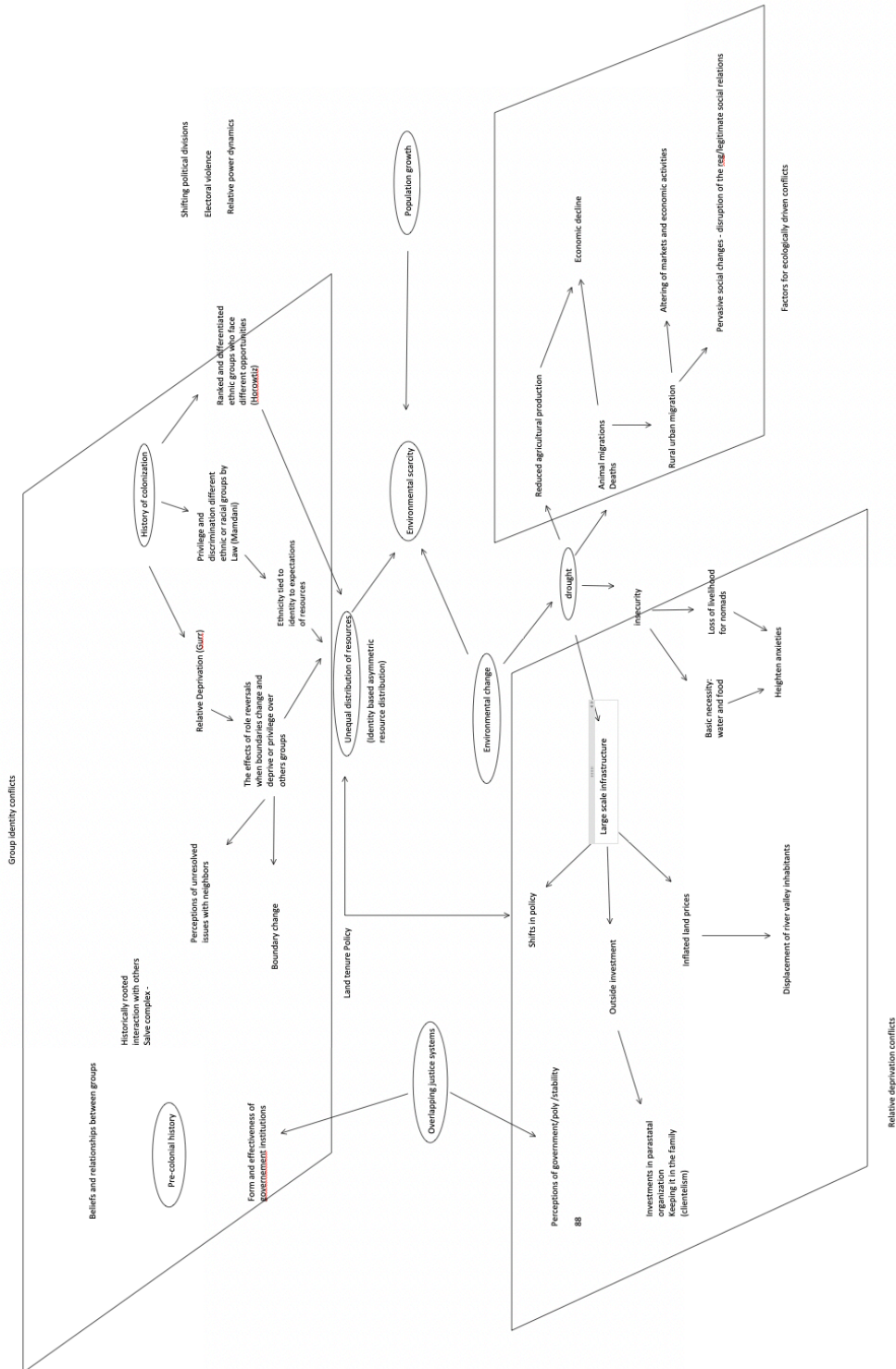


Figure 1: Environmental-Social system predating 1989 social conflict in Mauritania

Chapter 3: Methodology

3.1 Research impact on the larger field

This thesis employed a theory-building methodology, which utilized the process-tracing technique in an explanatory single case study of the 1989 Mauritania-Senegal conflict in the Senegal River basin. The objective of this thesis was to create research that contributes to literature on environmental scarcity and identity conflicts, specifically the unequal social distribution of resources as a source of environmental scarcity, its contribution to violent intra-state conflict in societies with a history of latent ethnic tension, and the development of intra-state conflicts into international conflicts based on identity. By examining the ethno-geographic scope of this conflict, I demonstrated the connectedness of water-resource scarcity, policy, and historic social dynamics by identifying a conflict, presenting a review of my investigation, and mapping the causal linkages between identity, environmental scarcity, policy, and violent conflict.

3.1.1 Terms and Definitions

Environmental scarcity response policy, for the purpose of this paper, included the policy in response to the sources of resource scarcity as defined by Homer-Dixon in 1994 *Environmental Scarcities and Violent Conflict: Evidence from Cases*. Homer Dixon stated that “environmental change is only one of the three main sources of the scarcity of renewable resources; the others are population growth and unequal social distribution of resources” (Homer-Dixon 1994 p8). These three sources of resource scarcity³⁵ are encompassed in the idea of “environmental scarcity.” In addressing the environmental scarcity response policy,

³⁵ The definition of scarcity includes the purposeful withholding of resources, such as asymmetric resource distribution and keeping certain people from accessing water.

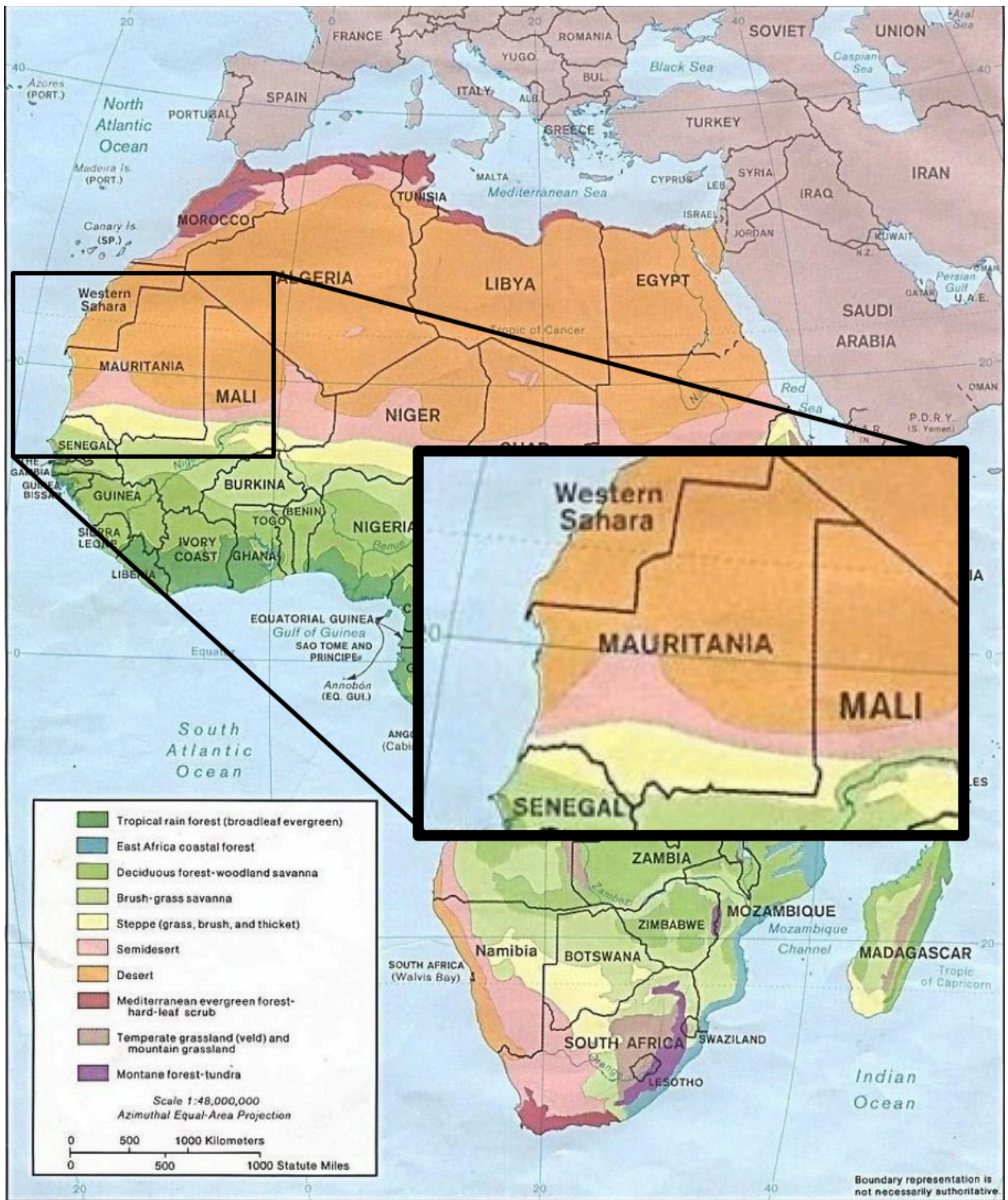
I will be looking at policies that address environmental change, population growth, and resource distribution.

In this, I compared the Mauritanian environmental scarcity policy in response to the extended drought period of the 1960s and early 70s in the western region of Africa, with the post-drought period to examine and evaluate the causal links that led to violent conflict in 1989. Through examination of other contributing factors, not just policy, I provided an explanation as to why those policies contributed to conflict and exposed what variables contributed to the onset of ethno-nationalist identity group identification, solidarity and mobilization towards violent conflict.

The term “drought” has different meanings for different climatic zones and does not denote a specific amount of rainfall. For the purpose of this paper, *drought* is defined as the situation where rainfall is below what is “normally needed and expected” as defined by Derrick in *The Great West African Drought 1972-1974*. The drought period, referred to above, was a period of consecutive droughts beginning in the late 1960s and ending with favorable rains in 1974 following the Great West African drought of 1972-1974 (Derrick). Mauritania, West Africa consists of four major climatic zones: Saharan desert Zone, Sahelian, Senegal River Basin, and Coastal Zones. In the Sahelian Zone and Senegal River Basin, drought means inadequate rain for pasture and inadequate rainfall for normal farming and maintenance of perennial marshy areas called *fadma* (Derrick).

These zones are of importance because the conflict falls directly in these ecological zones which experienced climatic changes that directly impacted society and conflict cycles. I looked specifically at the semiarid dessert, Sahelian Zone or steppe, and the Senegal River Basin because of the history of cross-ethnic constructive engagement and reciprocal action practices

that reduced the incompatibility of interests through environmental utilization and human management of green water resources. The geographic dispersion of different ethnic



Map 2: Climatic Zones of Africa with a focus on Mauritania

groups follows line similar to those that distinguish the different climatic zones. Rainfall and green water resource access is higher in steppe areas in comparison with semi-desert and desert zones. The dispersion of ethnic groups into different climatic zones comes into play when the different ethnic groups enact resource management policies that privileged or discriminated against certain specific identity groups.

While resource scarcity is acknowledged as a potential driver of conflict, the factors that most strongly promote conflict are debated (Daley). This thesis explored debates in conflict literature and weigh various explanatory factors that contributed to the Senegal Mauritania conflict, and to what degree they were impactful. I examined the various policy enacted to combat environmental scarcity and how this policy contributes to the outcome of the conflict. This aspect of intra-state, environmental scarcity conflicts is relatively undeveloped ((Daley),(Wolf)) in comparison with inter-state water cooperation ((Priscolli and Wolf), (Wolf), (Homer-Dixon)). There has been a rich history of water cooperation over international boundaries with “water serving as a greater pathway to peace than to conflict” (Matthews). There is not large amounts of research into intra-state conflicts over water resource scarcity, the dynamics of exclusion that, in the case of Mauritania, arise from a history of ethnic favoritism and differentiation and political exclusion.

Intra-state environmental scarcity conflicts are not simple conflict. They can evolve into an international conflict because of factors such as historical relationships, ethnicity, and identity role in cross-national affinities. This thesis demonstrates the connectedness of environment, social issues, and politics, so as to highlight the linking intra-state conflict to environmental scarcity by utilizing the method of historic process tracing. This qualitative analysis tool links causal pathways, and will help explain the relationship between water-resource scarcity and

conflict, and how environmental scarcity response policies perpetuated ethnic divisions in a post-colonial society. As the case study demonstrates, it was this combination of factors that exacerbated divisions, and led to violent inter-ethnic conflict that spilled over into neighboring nation-states, becoming an international conflict because of cross-national affinity of ethnic groups.

3.1.2 Process Tracing

Process tracing looks at an outcome or effect and investigates the causes of said effect. In performing process tracing, I executed a qualitative analysis of the causal relationship between resource scarcity and policy that exacerbated existing ethnic tensions leading to violent conflict between Mauritians and Senegalese in 1989. I am examining environmental scarcity response policy, which included a policy that addresses environmental change, population growth, and resource distribution, as the hypothesized precipitating cause of conflict in a region with latent ethnic tensions. Through examination of this hypothesized cause and its connection to the effect, ie. actions or intermediate outcomes, process tracing enabled me to explain various factors that contributed to the conflict. The main objective was “to showcase evidence of the extent to which an intervention’s key targeted outcomes have materialized and to investigate the causal mechanisms responsible for the outcomes” (Anguko). This theory-based approach tested different theories of causality-in-action to demonstrate the mechanism and causal links that were involved by examining the outcomes of each variable that unfold in the case study.

3.2 Research Question

What role did the environmental scarcity response policy play in the 1989 conflict between Mauritania and Senegal?

3.3 Dependent Variable

The outbreak of violent conflict along ethnic lines including non-state armed violence and one-sided conflict.

3.4 Unit of Analysis

Mauritania, specifically, cycles of peace and conflict. The unit of observation for this case study was the country of Mauritania during the period between 1960 decolonization and the manifestation of violent conflict in 1989. I looked at the development of policies to show briefly how changes in policies contribute to social stress. The focus was on intra-state conflict and environmental scarcity as a precursor to inter-state conflict. For this reason, the unit of analysis does not incorporate the country of Senegal.

3.5 Independent Variables

Post-colonial African groups inherited cultural differences that were differentiated through indirect colonization. This contributed to their ranked status and to a divided, ethnicized state bureaucracy. A history of ranked and differentiated racial and ethnic groups. Renewable resource scarcity due to policy and environmental factors.

3.6 Method

Process tracing in a single case study.

3.7 Case selection and Value Added

In this thesis I chose to analyze a historic conflict, that while having been analyzed in the past, has been not been reviewed in light new finding in the field on environmental scarcity and water cycles. Originally assessed as a conflict over racism in Mauritania, the research has grown and been reframed in the context of resource scarcity and social conflict. The analysis, in the context of resources scarcity and social conflict, was presented in the 1990s in the work Homer-

Dixon as they developed of the concept of environmental scarcity. While mentioning the conflict as an example of ecological induced conflict, Homer-Dixon did not delve into the details of the case.

Since this analysis there have been new developments in the field of environmental scarcity that have brought further differentiation to terms utilized by Homer Dixon. The terms enable deeper analysis of the social conflict aspects. Furthermore, there have been modern studies done on the time period following decolonization until present that when applied to the case study further illuminated causal pathways leading to violence. A more nuanced look at the underlying factors, how the history of social stratification can overlap with rainfall deviations to create complex conflicts and humanitarian emergencies was missing.

Several authors set the precedent for the analysis of the 1989 Senegal-Mauritania conflict in terms of ethnic violence and environmental scarcity. The most significant studies that consider scarcity and violence was the study are Homer-Dixon's analysis of the scarcity and violent conflict, Magistro's *Victims of Development*, and Magistro and Lo's *Historical and Human Dimension, Climate Variability*. These works set a precedent for the analysis of Mauritania in the context of ethnic politics and environmental scarcity.

Other spaces in which scarcity and environment were discussed was in the areas of transnational water dispute mechanisms for the Senegal River Basin. The organization that is responsible for the development of the basin is the *Organisation pour la Mise en Valeur le Fleuve Sénégal* (OMVS)³⁸. The researcher acknowledged a history of division and

³⁸ Since the 1960s the riparian states of Senegal, Mauritania, Mali and Guinea have been working in cooperation over the Senegal River ((*The Senegal River. Cases on Water Cooperation.*)(*The Legal Architecture for Transboundary Waters - UN Watercourses Convention*)). The Interstate Committee (*CIE, Comité Inter-Etats pour l'Amenagement du fleuve Sénégal*) and the Organization of Boundary States of the Senegal River (*OERS, Organisation des Etats Riverains du Sénégal*) were precursors to the OMVS which became an official entity in 1973. The countries incurred national debt to develop the large-scale water infrastructure projects of the Manantali dam on the Bafing river (a tributary of the Senegal river, and the Diam Dam at the mouth of the Senegal River where the river flows into the

differentiation amongst the tribes of Western Africa due to colonialism ((Saruchera), (Parker), (*The Senegal River. Cases on Water Cooperation*), (Ani, Kelechi Johnmary, et al.)), but they did not speak in-depth about the colonial legacy. This thesis fills the gap, contributing valuable research on Mauritania and the political identity, resources scarcity and conflict relationship.

Relatively little research was done on sub-state water resource conflicts. A focus on the interactions of domestic institutional structures and environmental factors was performed by authors Gizelis and Wooden but the area was relatively underdeveloped. With the increased numbers of intra-state conflicts since the 1960s, research into sub-state interactions begged for greater attention. Throughout the existing research, the discussion of the 1989 Senegal Mauritania conflict was limited to addressing resource scarcity and international water-resource resolution mechanisms. To add to existing literature, I discussed inter-ethnic identity issues and intra-national aspects of the conflict that have produced environmental scarcity policy. This contributed to filling the literature gap on sub-state government policy, social interactions, and environment.

3.8 Data Collection and Challenges

Data for this study came from multiple sources. Second hand accounts of conflicts, descriptive statistics concerning economic and ecological change, as well as population migrations, historic accounts, works dealing with the development of precolonial, colonial, and post-colonial identity are all useful in process tracing used in this thesis. Data collection for this case study was not without its challenges. Accessibility of pre-colonial history was difficult due to the history of oral story telling as the main form of cataloging history in the precolonial era.

ocean. These projects would reduce food insecurity, increase economic growth in the basin, and reduce poverty by creating income generating activities (Newton). This is the third water management group in the river basin since the 1960s.

This made mapping historical roots of the conflict difficult before a certain time. The colonial and post-colonial record were more accessible.

Accessibility to sources of qualitative data for this study was limited. Many studies done in West African nations begin either in 1989 or 1990. The ethno-nationalist conflict in Mauritania began before the start date of these studies making information collected on conflict events prior to 1989 not readily useful. The studies while beginning in the year of the conflict to did not include the years of incidents that contributed to the conflict development. This limited the analysis because the precuring events to the 1989 conflict were excluded from larger studies. To analyze the time period anteceding the events, I looked to reports and conflict summaries that directly postdated the conflict.

In accessing information about resource scarcity, it was important to differentiate between justice systems over time. Prior to the advent and input of a western system, a traditional tenure and dispute resolution system was in place. The dual justice system that took place following French colonization, where ethnic groups actively avoided the western system in favor of their traditional system, was a multilayered justice system. This was due to distrust in the western system especially when the old system was, for all intents and purposes, a working system known to the population. Mamdani argues that the exclusion of indigenous people was not voluntary but rather that they were relegated to the traditional sphere and forced to rely on traditional mechanisms. The exception was a select few favored groups or people who were invited to participate in the civic sphere.

The policy that was analyzed for this study was written in French originally. While the information was accessible in terms of finding the policy, the English translation of the policy was not. In a land tenure policy report, the direct wording of the policy was translated into

English. In effect, the policy that was chosen for analysis here was pulled from the Land tenure policy report, the original French was compared with what was published by the government of Mauritania.

Despite the limitations listed above, I felt confident that there was enough data available to substantiate the arguments of this thesis and present a rich case study of the 1989 conflict between Senegal and Mauritania. In the next section I introduced my case study, the context and my empirical findings.

Chapter 4: Case Study and Empirical Evidence

In this thesis, I argue that the root causes of the 1989 conflict are historically rooted ethno-racial tensions exacerbated by environmental scarcity response policy created by Mauritania government and escalated by increased rainfall and small scale. I examined historically rooted interactions in the development of identities and land settlement patterns during the pre-colonial and colonial period. The thesis then examines the social impact of erratic rainfall patterns corresponding to agriculture and economy, population displacement and disrupted social relations during the post-colonial period. I discussed Mauritanian government response through an examination of the government policy on land tenure, perception of governance and the economic and legal incentives. By following the micro-historic pathways, linking ethnic clashes and rainfall patterns, I highlighted the mechanism at play in the historical context making non-government ethnic conflict more or less prone to violent mobilization during rainfall cycles. This calls attention to the mechanisms at play and explains how intervening factors contributed to the vulnerability to violent conflict in Mauritania.

4.1 Historically Rooted Interactions

4.1.1 Precolonial Background

The tradition of oral history in West Africa makes it difficult to develop with precision, a timeline of historical fact prior to the entrance of European scholars into the region in the 18th century. Scholars brought together the stories, creating a timeline of events leading up to the entrance of Europeans. What was conceived is as follows: prior to the entrance of Europeans, the territory north of the Senegal river, what is today the nation state of Mauritania, was first colonized by people Arab-Moor decent that migrated across northern Africa. These people, were of a light complexion, spoke Arabic, and were practicing Muslims. In their conquest of the

territory they carried the word of Islam and spread the religion across northern and western Africa.

The harsh ecological zones of the territory of Mauritania were ruled over by the Beidan descendants of the Arab-Moor colonization utilizing emirates or confederacies (visualization of the confederates ruling area in Map 3 Precolonial Ethnic Polities in the Senegal River Valley). They instilled a highly stratified caste system that divided society along racial lines. Each emirate was ruled by warrior class in alliance with religious officials, forming the top tier. The next tier consisted of vassals³⁹ and two artisan classes followed by the bottom tier consisting of those in servitude or slaves⁴⁰. The upper tier's consistence of a warrior class was due to the nature of establishment of wealth.

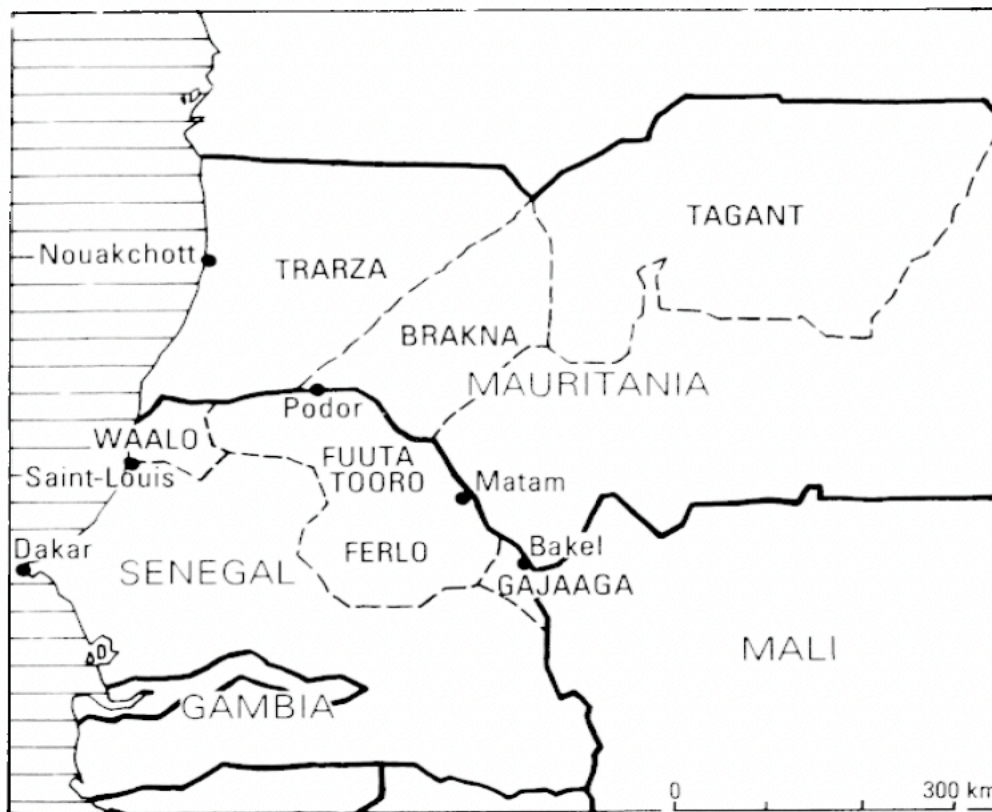
In the emirates, land was not viewed as a personal asset. The possession of people and treasure was what determined the wealth of a person. "The Primary objective of warfare, which was continual in many places, was to capture people and treasure, not land which was available to all" (Herbst 20). For this reason, African leaders would exploit people outside of their polity, choosing to take the women, cattle, and slaves from other outsider groups. The process of capturing people rather than capturing territory was the mechanism by which African States grew and because power and wealth lay in the acquisition and maintenance of animal herds and humans, ie. slaves, war-like raids were common. The warrior class led the raids that captured the herds and people of other groups.

The growth of the African state was largely consisting of the obtainment and maintenance of a slave population. In the case of the emirates of Mauritanian territory, the

³⁹ Vassals are those people who provided services to the upper class. These people were granted protection physical and economic especially during droughts (they paid tribute for this protection).

⁴⁰ Those in states of servitude or slaves were typically sub-saharan Africans. The sub-Saharan African (consisting of the Tukulors, Fulani Soninke/Sarakole and Wolof). The captured groups became Arabized with time, coming to be called *Haratin* and learning Arabic.

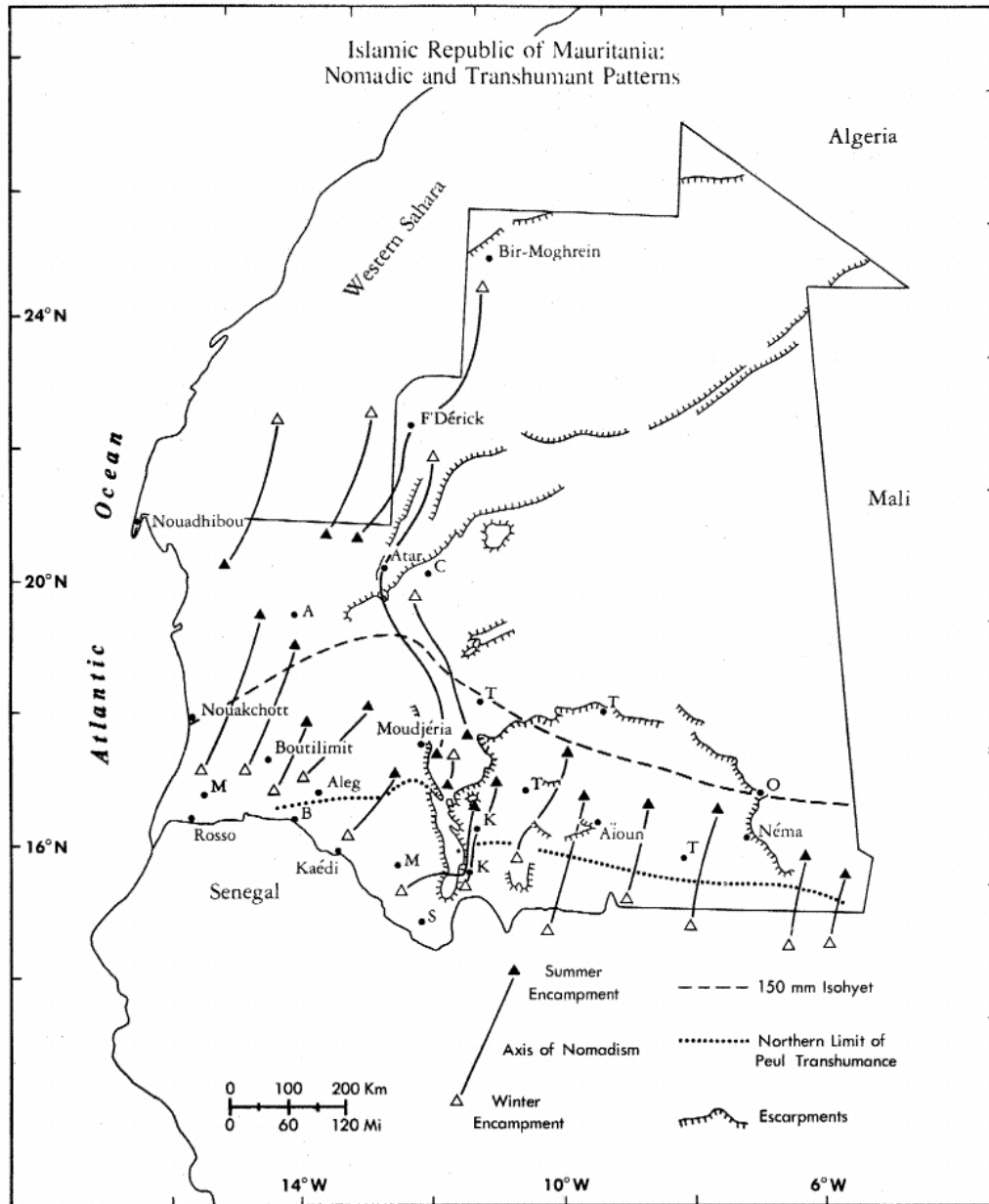
closest and most easily differentiable population was the sub-Saharan African population that lay to the south of the Senegal River and in the river valley. The groups are differentiable visual based on their skin colors. The people of Arab decent are of a light skin color whilst the sub-Saharan African population have a rich dark color. The black Africans that were forced into slavery under the growing emirates became part of the caste system. They were assimilated, learned Arabic and came to be called *Haratin*.



Map 3: Pre-18th century Ethnic Polities in the Senegal River Valley (Magristro)

The main economy of the Beidan group outside of warfare was extensive livestock raising which requires a certain expertise in exploitation of resources (Bennoune). The exploitation of resources required constant mobility of the emirates. The mobility of the group was geared toward guiding the herds of livestock (ie. cattle, goats, sheep, camels) across the semi-desert and steppe regions to graze the animals on grasses that grew following the rainfall.

Timely rainfall patterns determined the migration patterns of these nomadic people. Where the rain fell and green water resource enabled the growth of fodder, the nomads followed.



Map 4: Nomadic patterns (Source: Adapted from the Atlas de la République, in Vermeer)

Key for place-name symbols on Map 4 and Map 6:

- A Akjoujt
- B Boghé
- C Chinguetti
- K Kankossa, southwest of Aioun
- K Kiffa, west of Aioun

M Mbout, east of Kaédi
M Méderdra, north of Rosso
O Oulata
S Sélibabi
T Tichit, north of Aîoun
T Tamchakett, Southeast of Moudjéria
T. Timbeédra, southeast of Aîoun
T Tidjikja, northeast of Moudjéria

Map 5: Drought Severity, 1970s Islamic Republic of Mauritania (Vermeer)

During the winter months, there was small scale farming performed near the winter camps. These camps lay mainly to the south along the Senegal River and along the Bakoye river, a tributary of the Senegal River (with in the Senegal River drainage basin). The migratory patterns of the nomadic Beidan people is represented in Map 4. Land was not conceived of as property of one but rather as communal access and so was its cultivation. The act of the farming was conceived of as communal practice and the product was communal. Ethnically Beidan ruling elite would shepherd their animals to graze them in the northern lands. The lands to the south, in the river valley and that was within the communal territory of an emirates was cultivated by the Haratin slaves. The Haratin would cultivate the lands and pay tribute to their masters.

The area in which a Haratin lived attached them to their master. If a Haratin lived within the geographic area ruled over by an emirate then they were the slave of that emirate. The concept of slave in this society meant that the person was the formal property of the emirate, however they were not bound in chains. Haratin were permitted free movement to a large extent. The expectation was that they provide agricultural products to their owners in the form of cultivated food products.

The black sub-Saharan African tribes between Mauritania and Senegal, within the river valley, included Wolof to the west near St. Louis, the Hal-Pulaar in the middle river valley, the

Soninke in the east. These groups utilized a tributary mode of production based on a sedentary mixed economy characterized by a tribal⁴¹, corporate landholding system. "As long as the peasant cultivators exploited their lands and paid their traditional taxes to the ruling chieftains representing the authority of the emirs, they maintained the security of tenure and were granted 'protection'" (Bennoune). A tributary mode of protection is the exchange of good for protection from other. The black-African system for land resource utilization differed from the Beidan emirates system.

In this system of land utilization, land was owned communally and distributed by the chief of tribes. In particular, the Hal-Pulaar held rights to the *waalo* lands in middle river valley. The ownership of lands was the extension of the household and up to the extension to the family lineage. The land within the family was redistributed annually to members of the family based on the extent of the flood. Tithes were paid by family members to secure the tenure of agricultural lands (Parker et. al)⁴².

The *waalo* lands of the middle river valley have been a source of competition and tensions within and across communities because of the production capacity of these favored lands. The area enjoys the favorable rains and win years when rains are not favorable, the river, even at reduced flow, can be drawn from. "Conflicts between herders and cultivators have a long history in the area" (Parker et. al). The control of the favored lands was sought after because they host high green and blue water access necessary to the sustenance of life.

⁴¹ The term Tribal society is referred to by author Bennoune as an "exceedingly ill-defined catchall" which is used by Euro-American Anthropologists in premising their theoretical assumptions on ethnocentric observations distorted by the ideological presuppositions of colonial administrators that tribal systems were final political units when in reality, almost all Saharan tribes including those of Mauritania, either formed independent large desert confederacies, known as emirates, or were loosely linked to regional states and multi-ethnic empires"(Bennoune).

⁴² Tithes are formal percentages of the annual produce or earnings paid to the support the community or group. In this case tithes are paid to the owner of the lands who was the head of the family and furthermore to the village.

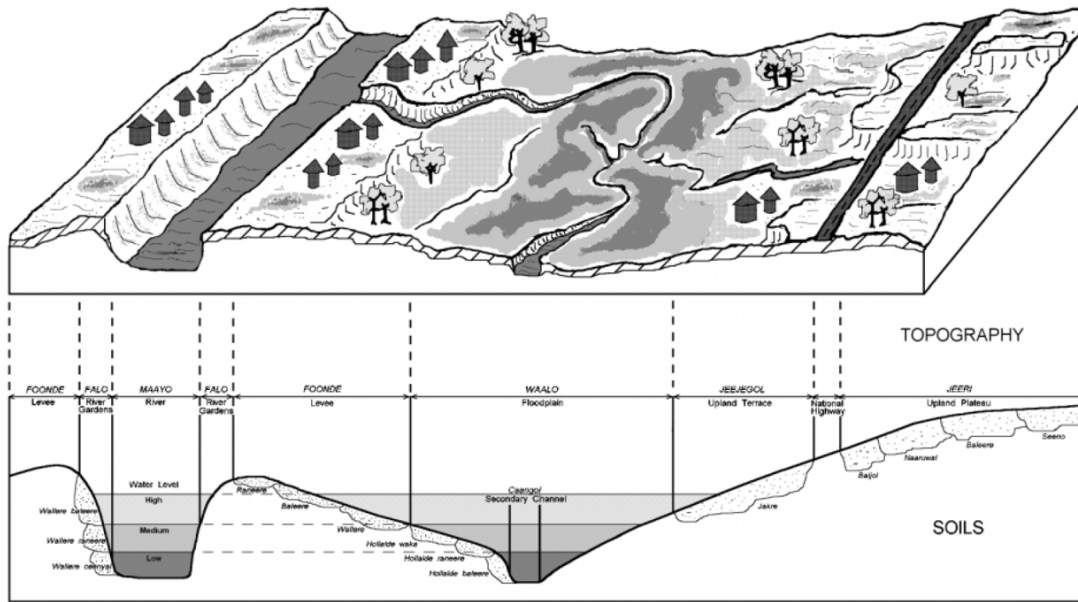


Figure 2: Discreet ecological zones of the Middle Senegal River Valley, dispersed laterally from the river and extending outward (Magistro and Lo)

4.1.2 Relative Deprivation in Pre-colonial Mauritania

Prior to the 18th century, the middle Senegal River Basin was occupied by Trarza and Brakna emirates. These emirates, Beidan by heritage, pushed the Hal-Pulaar tribes⁴³ south of the river into the *Waaloo* and *Fuuta Tooro*⁴⁴. “Ongoing warfare and raiding for slaves between the Maure emirates and the Senegalese of the south bank would eventually would lead to French Pacification in the region in 19th century” (Parker et. al. 16). The captured and enslaved black African population became part of their Beidan master’s culture and learned Arabic. They lived in the Senegal River Valley and farmed the lands of their absentee Beidan masters. Of the products they produced, a portion was reserved for sustenance and the rest paid to the Beidan masters. Beidan pre-colonial subjugation of black Africans included but was not limited to

⁴³ The concept of tribes is an expression of a political system’s degree of ethnic fractionalization. It embraces the concept of ethnic groups as nothing more than units of a particular size in its attempt to explain political, social and economic outcomes, according to Posner in *Institutions and Ethnic Politics in Africa* (Posner).

⁴⁴ The Waalo and the Futao Tooro were sub-Saharan African tribes whose territory extended from the Senegal River Valley (Robinson).

raiding, confiscation of belongings and enslavement. The previously free black-African population was subjugated to the Beidan. Their movement was restricted and they were not permitted the same freedoms as before they were enslaved creating a dynamic of deprivation within the Haratin community.

4.2 French Colonial Intervention

In 1659 the French colonized the island of St. Louis as a trading post and began to make their way up the Senegal River to access goods from the interior. The French traders who passed the river up were forced to pay taxes and navigation fees to the Waalo, Trarza, and Brakna kingdoms through which they passed on the way to deliver their trade goods back to the St. Louis (Barrows). The French, though they had entered West Africa by the 17th century, did not begin the true push for expansion into the territory until the 19th century. The inaccessibility of the continent is due to limited entry points into the center via navigable waterways and the vast nature of the territory make the interior of the continent (Wiseman).

Under Governor Faidherbe's governorships (1854-61 and 1863-65) French colonial control over land pushed up the Senegal River Valley and posts were established at Podor and Bakel. Through the first and second Franco-Trarza wars French Governor Louis Léon César Faidherbe pushed into the Senegal River valley⁴⁵. He established at these posts' centers of trade, that were in the interest of Bordeaux wholesale exports, and western administrations. The French offered protection to the agricultural communities on the northern bank of the Senegal River (Barrows). As part of the French expansion strategy, they invited Hal-Pulaars north of the river

⁴⁵ The Franco-Trarza wars in the 1800s were of the administration of the French Governor Louis Léon César Faidherbe (1854-1861 and 1863-1865). The wars pushed for expansion of the French colonial territory into West Africa via the Senegal River in an attempt to replace the existing trade system with a system that was in the interest of large Bordeaux wholesalers. The plan was to utilize the force of the French military and naval forces to dominate the Senegal River Valley, protecting agricultural communities, namely protecting the agricultural communities on the Northern side of the River from Mauritanian namely the Trarza empire under Mohammed-el-Habid ((Barrows) (Robinson)).

in following the wars and “in many cases the French urged the Hal-Puular-en to cultivate lands already in use by the Haratin on explicit grounds that indirect rule could be best exercised through an elite rather than through a denigrated group such as the Haratin” (Parker et. al.). In their push for expansion, the French planned to take control of the gum root trade of the Beidan, as well as, to utilize the valley for agricultural production and trade the cash crops⁴⁶. They were offering protection to black African groups from the Beidan raids. The French established through favoriting the Hal-Pulaars as a higher class of peoples over Haratins that occupied the territory. Hal-Pulaars expropriated Haratin land with French backing creating animosity between the ethnic groups.

4.2.1 French Policy of Assimilation and Ruling

These European centers serviced the needs of European traders in Africa and in this nature, they provided centers for the French Policy of Assimilation It became common for European traders to take African women as their wives, even if they had a woman back in their country of origin. This custom of taking a wife produced a mixed-race called *mulatto*. The half European, half black African children were a large portion of the class of people considered to be assimilable by the French. The *mullato* were somewhere between their parent as far as the color of their skin and their social status. They were ranked below their European parent and above their African parent. While they resembled the indigenious, they were expected to comport themselves as their European parent would.

⁴⁶ The traditional crops of the Senegal River Valley are sorghum and millet. These are crops that were traditionally consumer for sustenance. When the French entered the region they wanted to shift the valley’s agricultural production to ground nuts and export the nuts as a cash crop. This would increase revenues from the production of the land which the French had claimed as their own. Furthermore, French owned shipping companies stood to earn from the export. To replace the production of sustenance crops the French conceived of and actualized the import of rice as the main sustenance. This further increased the revenues of French owned importing and exporting companies and shipping companies. To note this replacement of the main food crop is not whole and complete replacement but a partial replacement the stood to economically benefit the French colonial interest (Thioub).

The other part of the assimilable class consisted of a small subgroup of urban dwelling black-Africans. This group was privileged to attend European schools, along with *mullatos*, and to utilize institutions such that they developed in tune with a European standard. The privilege in accessing these institutions was linked to the groups' geographic location and to the fact that the population accepted the assimilation. The location of this population near French colonial power centers enabled them access to the schools and to the institutions. The people further chose to accept and integrate into the system unlike the Beidan. That the *mullato* and black African groups chose to become involved in the system, set them apart from their counterparts who saw the systems as a measure of forced conformity.

The subgroups of “assimilable” were integrated into the school system. The schools were run by Christian missionaries and incorporated the rituals, like the singing of hymns and prayer, of the religion into the education. These practices were viewed with mistrust by native people, especially Beidan, due in part to the fact the majority of West Africans practiced Islam as a result of the Muslim expansionist conquests preceding French colonialism. The schools that were brought to the territory were part of Catholic missions and utilized Catholic religious practices as part of the daily routine (Barrow). These schools seemed to be built on the idea of education but more importantly of conversion to Catholicism making them suspicious to the Islamic community. The result was that native groups ascribing to Islam, or who did not convert, were left out of the colonial educational modernization process and were relegated to the periphery as backward groups.

This class of assimilable black-Africans and the *mullato* were given increasing numbers of positions in the administration and the French expanded their influence in West Africa. The French however did not extend direct rule north of the Senegal River Valley. Following the

pacification of the middle River Valley at the turn of the 19th century, the French turned southward for extension of direct rule, choosing not to enter the hinterland region. They chose to implement a system of indirect rule North of the Senegal River Valley in Mauritanian hinterland territory.

In contrast, the Mauritanian hinterland was ruled via indirect rule in the northern region of Mauritania left the former empires to rule themselves, a part from European influence. This system of indirect rule set the Beidan ethnic groups apart from their southern black-African counterparts. The territory of Mauritania was rule from outside of the formal boundaries from of the coastal city of St. Louis. This was a further separating factor between ethnic groups as the assimilable population, that had been privileged to European education and access to European institutions, had power in the decision-making processes prior to decolonization.

4.2.2 Ranked and Differentiated Ethnic Groups

Years of the purposeful divide, rule, and policy under the *West African Union (AOF)*⁴⁷ that resulted in a highly stratified society along racial and ethnic lines with subsequent administrations reversing cycles of privilege and asymmetric resource distribution. The AOF was ruled in majority via indirect rule with a policy of assimilation⁴⁸ which shifted toward a system of a direct role in the *quatre communes* and protectorate administrations in the interior (Idowu 1969).

⁴⁷ The West African Union or *Ariqne-Occidentale française*, in French, was a federation of eight French colonial territories in West Africa including Senegal, Mauritania, French Sudan (now Mali), French Guinea (now Guinea), Ivory Coast, Upper Volta (now Burkina Faso), Dahomey (now Benin), and Niger.

⁴⁸ The policy of assimilation was introduced in Senegal (which consisted mainly of Goree and St. Louis) and spread from “the Senegal River Valley to the Gulf of Benin” (Idowu 1969). Curiously, this description of the application of the policy of assimilation does not refer to Mauritania as the northern most boundary of application but rather to the river valley which extends 20km or less into the territory of Mauritanian. This speaks to the nature of the rule over Mauritania and the Beidan people who live there. They were caste apart from the colonial system and practice.



Map 5: Colonial partition of Africa in 1914

The division of the AOF into different ruling structures direct and indirect had mixed results. The

Indirect colonial rule created a ruling system that fragmented the native populations and differentiated them from each other and from European French. The ruling system accentuated differences and through management of these differences created the idea of tribes, and ethnic groups. The measures taken to create and facilitate colonial administration sharpened contrasts and evaluations between groups. Black-African populations in the Senegal River Valley and to the south in Senegal experienced direct rule meaning they were privileged to the European systems. The centralization of power structures on a regional level and administration from the capital meant that the river valley became politically fragmented into local clusters. Colonialism

mitigated of cohesion of subgroups. This resulted in the strengthening differentiation within the black African subgroups, for example, weakening of ties with the Wolof, Hal-Pulaar and Soninke ethnic groups south of the Senegal river. The Wolof Ethnic group inhabited the river valley from the western coast to approximately the city of Podor. The Hal-Pulaar inhabited the river valley from Podor to Bakel, in what is called the middle river valley, and the Soninke inhabited the valley to the east of Bakel. Each other these are sub-Saharan African ethnic groups with unique languages that are not mutually intelligible.

French colonial rule in counter, had a consolidation effect on the power of rulers that they encountered, like with in the Beidan communities in the northern territory of Mauritanian. The result was to undercut the principal source of intra-ethnic divisions, to solidify the ethnic group for whom the ruler spoke, and to facilitate group-to-group comparison (Horowitz Ch.4). In this way the French, by ruling the emirates of Northern Mauritania as they did, created unity amongst the different Arab-Moor groups who had vied for power in territory to the north of the river valley prior to the entrance of the French. The ‘consolidation effect’ resulted in more extreme polarities the first between natives and non- natives and the second between people of Arab-Moor decent, Beidan, and people of sub- Saharan or black African descent.

The system of Indirect rule used within the Mauritania hinterland territories utilized the traditional ruling structures in order to establish and maintain colonial power over the vast, highly un-traversable terrain. The transmission and enforcement colonial policy over the territory through traditional structures provided for the institutional expression of cultural unity. It ensured that disparity would always been seen through an ethnic lens. Horowitz’s posed that this

imposition of colonial evaluations directly impacts the self-esteem of groups so much so that it created fear and anxiety that effected the group's collective psychology⁴⁹ and the individuals'

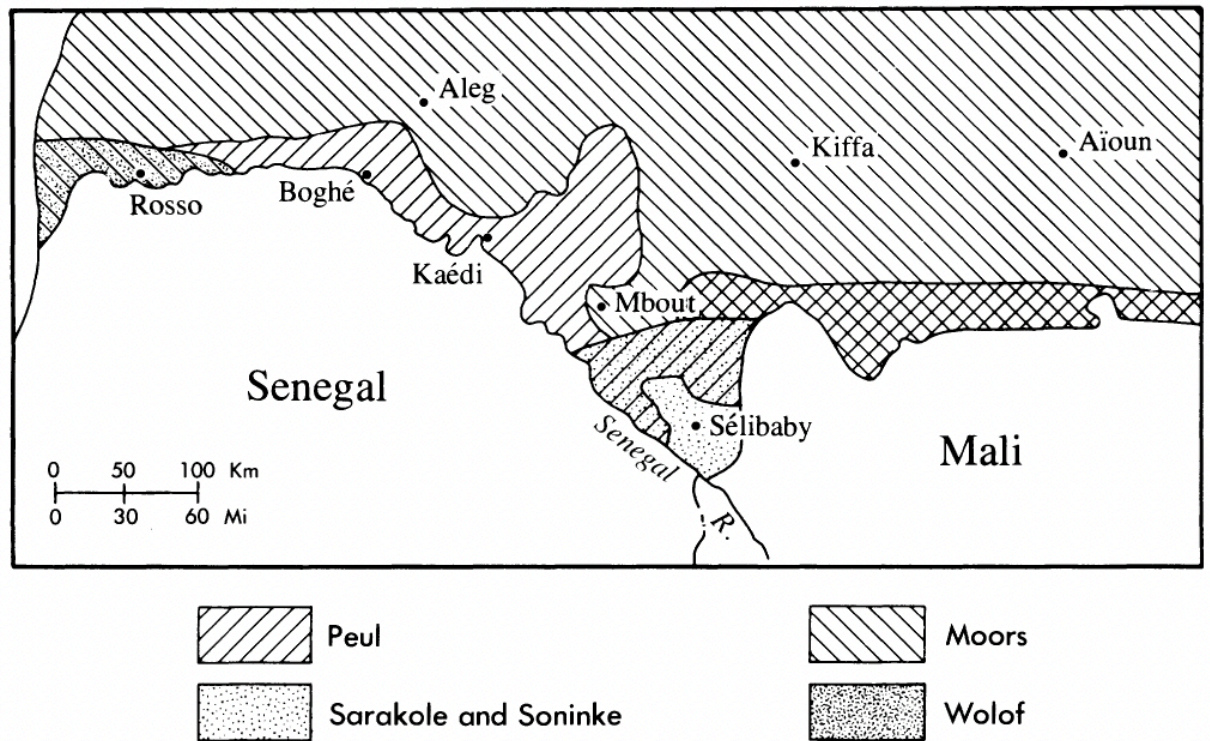


Figure 3: Ethnic groups in southern Mauritania (Source modified from Atlas de la République in Vermeer)

positional psychology⁵⁰. The impact of the colonial evaluation created a psychological feedback loop in which the group that self-reinforced the assigned characteristics in their

⁴⁹ Collective or group psychology describes the nature of a group of two more person who are interdependent in their relationship and interactions with the other(s). The members of this group share certain common values and norms or ideology that regulates their behaviors and actions within the group. The colonial impact assigned group worth based would them impact the values and ideology of the group changing how they interact.

⁵⁰ Positional psychology characterizes the interactions between individuals. The "position" being the alterable beliefs of the person in regards to their rights, duties and obligations. The colonial impact assigned group worth based would them impact a person's belief about self; how much or what they deserve, what they are capable of achieving, how much or how little they must contribute, etc.

intergroup relations. It creates a security dilemma⁵¹, which manifested in the case of Mauritania as a post-colonial ethnic security dilemma.⁵²

Ethnic groups with greater proximity to centers of French colonial power, such as Rufisque, St. Louis, and Bakel⁵⁴, were more likely to receive greater infrastructure and education than those that existed at a greater distance because of the European experience of state consolidation⁵⁵. When Europeans began to colonize Africa, the ruling structure focused on military and trade power in coastal urban centers⁵⁶ (Herbst). The development of the power centers privileged groups that happened to live closer to the centers, to the coast, and to navigable waterways connecting inland trade to the coastal capital. Therefore, traditional settlement patterns of indigenous groups unintentionally influenced greatly their access to European influence including, culture, religion, schools, trade, and infrastructure. The greater the exposure and the extended interaction increased comfort with European presence and may have helped to make more comfortable indigenous populations to adapting. The privilege that these groups enjoyed by right of the location provided them greater European exposure and made them more advanced than less proximate groups.

⁵¹ Security dilemma is perception that the groups are a threat and the escalation based on perception of that threat. The security dilemma is an escalator of tension because the more insecure each side feels the more measures that will take to increase their security and the other will react to exceed the threat they feel creating a “spiral” effect.

⁵² Ethnic security dilemma translates to “if your group is not in power then you will suffer.” This feeling of insecurity increases the potential for conflict between a group and the government especially when representatives of an ethnic group are excluded from state power, especially if they experienced a loss of power in the recent past, if the group has increased mobilizational capacity, or if the groups have experienced conflict in the past. (LEC at 88)

⁵⁴ Then impenetrable nature of the African continent played in to these locations becoming centers of French Colonial power. These locations the first two being islands and the third being the most inland, riverine location accessible via boat, were strategically selected because of economic viability and military stability.

⁵⁵ The European system of power consolidation characterized by profound trade link between cities as core political centers and rural areas as a means of excising taxes and exerting power created an urban ruling class. One of the central reasons for the creation of relatively central state apparatus in Europe was the continuous aggressive competition for trade and territory in their nation-building process ((Tilly) in Herbst).

⁵⁶ The coastal urban centers were mainly designed to service the needs of the colonizer. their coastal location demonstrated the low priority of power extension to hinterland territories and the prioritization of ease of transportation and communication with Europe (Herbst).

In extreme situations, like Mauritania, the capital city was located outside of the normal boundary of the territory and French rule occurred via the ‘*Senegal*’⁵⁷; “The administrative headquarters of [the Federation] was in St. Louis in Senegal, and nearly all indigenous civil servants and officials were Mauritania River sedentaries” (Weinstein 6). Indigenous civil servants consisted mainly of these assimilable mixed and black-African populations that lived in French built and controlled urban centers. French Colonial power centers at Podor and at Bakel were riverine cities on the southern banks of the river in Senegal. The northern bank of the river was left without development but still under French colonial rule⁵⁸.

Within ‘*Senegal*’ there were three categorizations of people: French, *mulattos*⁵⁹, and *Senegalese*⁶⁰. The French considered the Mulattos and the Senegalese to be assimilable (Idowu 1969) when the French extended education these were the first and few to receive an education. The policy of assimilation created a new, privileged class of *mulatto* people within the society. This group was “fond of describing themselves as *ni blanc, ni noir; c’est du café au lait* (Idowu 1969); this translates to not black, not white; a coffee with milk. They were a mixed-race group who were elevated status because they had one French parent and therefore enjoyed a level of pampering from the colonial government, receiving incentives for education⁶¹ and primary focus

⁵⁷ For a long time ‘Senegal’ meant the cities of Goree and St. Louis because these were the only well-established localities. Even though there were a number of established military and trading posts in strategic locations, these original two localities, along with Rufisque and Dakar, were the only locations that enjoyed French civil and political rights. They were known as the *quatre communes* (Idowu 1969). Mauritania was ruled as an extension of Senegal as part of the AOF and, prior to decolonization, the region was economically and politically dependent on the Senegalese administration.

⁵⁸ The residences of the northern bank of the Senegal River were extended protection under the French from Mauritanian emirates but only in the river basin.

⁵⁹ Mulattos are the product of the union of one French parent and one indigenous African, in this Senegalese, parent, typically the female parent. The instance of French merchants living with Senegalese women was in 1685 and the practice of taking a Senegalese wife became general practice of these French Merchants upon arrival in the in Africa, but the racial union did not become normalized until 19th century after the French Revolution (Idowu 1969).

⁶⁰ Senegalese were considered to be indigenous people who lived in the *quatre communes* (Idowu 1968).

⁶¹ As part of incentives for education, students were given scholarships to attend school in France. These students were given a stipend and sent to France to study for secondary school. They were ill prepared for the journey, having not been adequately equipped for a life abroad, nor having a support system of parents or guardians to take care of them in place in France. The result was that these students often felt out of place in their environment, and, having

in schools⁶². The *mulatto* became a rank above Senegalese and a rank below their French Fathers; privileged by birth and aided by the French government. They were more likely to attend Catholic mission schools and to adopt the ways of their French parent over the ways of their African one (Idowu) making them an advanced group in society. They were expected to act like their French parent even though they carried the color of their African parents. Their education level enabled them to become actors within the French system, taking positions of power within the AOF ruling system⁶³.

Of the classes of people within the region, the *mulattoes* and a select few “assimilable” Senegalese in the *quatre communes* became part of the western educated advanced group. Their counterparts were the remaining population which incorporated the Muslim community. Mauritians, specifically ethnically Beidan Mauritians, in this case, were part of this backward group because of their religion and inherited geographic space there they existed outside of the sphere of the rule of the French Colonial administration.

Ethnically Beidan groups, though owning property in the Senegal River valley under the traditional system, existed in *hinterland*⁶⁴ areas above the Senegal River Valley. “During the colonial period, Mauritania was little more than an administrative appendage of Senegal from

inferior prior education in comparison with their French peers, they would return home discouraged after having quit school early (Idowu 1969).

⁶² Education in the AOF could only cater to a small amount part of the population. It focused mainly on mulattoes children and a small amount of “assimilated” Senegalese. The remained of the majority Muslim population remained skeptical of the French education system because it encouraged the conversion to Catholicism. This religious education system remained in place in colonies until 1903 when a secular system was introduced by the French government (Idowu 1969).

⁶³ According to Idowu, *mulattoes* dominated local politics, finding ready employment in the French system partially because of their education and the other part because of an inability to bring adequate numbers of European to the colony to fill the positions. This created a French-*mulattoes* oligopoly.

⁶⁴ Hinterland is an area laying inland from the coast and is remote from urban areas or metropolitan or cultural centers (Herbst). Hinterland countries, such as Mauritania, have geographically large areas of hinterland and do not have areas of high population density. This is to say that areas of medium and high population density are relatively small areas of the country. For example, Mauritania, despite its relatively large size by African Standards, had 54% of its population in urban areas compared to the African Average of 32 percent ((World Bank, *World Bank Development Report 1998*) in Herbst)

where it was governed by the French who did nothing to develop the territory” (Wiseman). The physical geography made it difficult to establish formal control over the territory and, as a result, political power tended to diminish as the distance from the political core increased (Herbst). Ergo, the Beidan were geographically marginalized under the AOF, not enjoying the same access to trade, education, or infrastructure because of the proximity and relative distance from centers of power. This falls in line with locational marginalization talked about by Horowitz. This form of marginalization is inadvertent or unintentional and happens as a consequence of uncontrollable circumstances.

In sum, the territory of Mauritania did not have a regional center of colonial power but rather was ruled via Senegal from St. Louis. French colonial centers were built on the southern banks of the Senegal River in Senegalese territory. The majority of administrative positions were filled by *mulattoes* originating from areas south of the Senegal River Valley up until the end of the 20th century (Idowu 1968). Mauritania existed outside of this administrative structure, for the most part, because Beidan groups were able to retreat into the hinterland⁶⁵. The French, while having laid claim to Mauritanian territory, did contribute much to the region that lay outside of the river valley and left the region at decolonization with little infrastructure (Wiseman). This created Beidan groups in Mauritania as a marginalized, backward group by standards set by Horowitz.

These were the groups were privileged and considered to be advanced because of the European education that they received and in the case of the *mullato* the privilege of being born to a European parent. They enjoyed greater employment in the governing structure of the AOF as

⁶⁵ People and groups who might be alienated by regimes have a ready-made hinterland area, in which political control is limited or non-existent, into which they were able to escape (Herbst)

well as greater opportunity to work in trade. Mauritanian groups outside of the river basin did not have access to European influence like residents of the river valley would have.

These ideas of backward and advanced groups received mixed reviews from the colonizers. Backward Beidan groups were considered authentic whereas the advanced black African groups would have been considered more intelligent, among other differentiations. This phenomenon created and entrenched group worth into the ranking system that was tied to present of the French and other foreigners as ethnic strangers and enforced by the ethnic groups' own elites. The impact of inconsistent and uneven handling of ethnicity French colonial rule resulted in the entrenchment of evaluations of the worth of the ethnic groups is important to note because it influenced internal group sentiment and sentiment in relation to other groups.

The Beidan groups felt at a competitive disadvantage to black Africans leading to feelings of inferiority and fear. This affects Beidan motivation making them feel disadvantaged in society. In this discouraged state, they created a self-fulfilling prophecy: they felt they could not do well and led them to not do well in society or not flourish given the opportunity at independence. The feeling of disadvantageousness is connected with feelings of domination by black African groups. The fear of subversion to black Africans led to what Volkan calls "fear of dying off" whereby the Beidan felt as though their group was in danger of ceasing to exist. On the other side, this dynamic plays into the feelings of the black African groups. The black African groups feared role reversal, should the backward group gain power. Role reversal would invert the power scheme, putting black African groups on the bottom.

4.2.3 Relative Deprivation in Colonial Africa

Once forced to flee, Wolof and Hal-Pulaars began to return to the northern bank of the river at beginning of the 20th century. At the same time, the French declared Senegal and

Mauritania to be protectorate states in 1903 (Magistro). The return of the Wolof and Pulaar population to the Northern bank was facilitated by the French in the interest of making productive agriculture for the purpose of growing and exporting groundnut cash crops. This shift in the production patterns was to benefit Bordeaux wholesale interests (Barrows). Wolof and Hal-Pulaar communities had managed to recover and cultivate lands lost earlier to the Trarza and Brakna emirates on the north bank during slave raids that forced Blacks to flee south into Senegal (Park, Baro & Ngaido 1990 in Magistro). This pacification extended into the territory or Mauritanian but not beyond the river valley.

The entry of French and subsequent extension of power in the river valley forced the Beidan emirates, mainly the Trarza and Brakna, to give up their lands in the middle river valley. This land is the most fertile land in the river valley from the boarder with Mali to the coastline because the yearly flooding produces large tracks of land where recessional flood waters plain wash in minerals and then recede or evaporate. This land area is called *waalo*. The land was given to Hal-Pulaars and Wolof with French backing to be farmed. Haratin were forced off the land and Beidan influence in trade economy was replaced with French interested groups by a Governor Louis Léon César Faidherbe sponsored by wholesalers of Bordeaux. After the loss of influence in trade in the river valley in the 19th and 20th century, the Beidan were not able to regain their influence. For the Wolof, Hal-Pulaar ethnic groups, this was favoring and acceptable as a righting of historic wrongs because they had previously been driven South of the river by Beidan raids and threat of enslavement. The Beidan lost economic power in the river valley never to be regained or to achieve their former glory. The Haratin were forced from the lands as the land of their masters was expropriated.

4.3 Decolonization

4.3.1 Institutionalization of Discrimination in Mauritania

As the previous discussion outlines, French colonial rule instilled policies of differentiation, constructing different legal standards for ethnic groups in Mauritania. French colonialism in West Africa ruled directly over administrative centers: St. Louis, Podor, Bakel, etc. These civic centers mentioned here were the centers closest to Mauritania during the colonial period. It was only in 1957, three years prior to decolonization that the intra-territorial capital of Nouakchott was established, prior to this Saint-Louis was the exterritorial capital and ruled the Mauritanian territory via indirect rule. The French relied heavily on indirect rule to assert power over the vast expanse of territory that was the *AOF*. Groups of people who were delineated as residents but not as natives were excluded from justice, power, land ownership and participation in governance in what is referred to by Mamdani as “institutionalized regime inequality” (*Mamdani, Define and Rule Native as Political Identity., 51.*)

Beidan groups that lived to the north and the black-Africans of the river valley held onto their traditional practices and values over adapting to the French European system. This dynamic is argued by Mamdani, as attributing to states failure and the fragility of Mauritania (Mamdani). This self-exclusion set the group apart from those being ruled in the Senegal river valley in unison with the French relegation of indigenous to the traditional sphere can be seen as a setting the scene for the categorical inequalities post decolonization. The define and rule attitudes toward ethnic groups continued on following decolonization and contributed to the formation of new identities amongst ethnic groups.

Through their separation from French administration, the ethnically Beidan developed aspirations for nationhood that came to rival the aspirations of the black-African groups. This set

the stage for determining who would be considered authentic members of state versus others. The division enable the ethnic groups to develop distinct claims to prior control over the state. The Mauritania on the basis of majority population and relative land holding and the francophone black Africans on the basis of experience in the *AOF* administration and greater education via the French missionary schools.

Ethnic identity is an expression of the ethnic community that has a shared ancestry common kindship. The implication of borders 1958, when Mauritania became its own administrative entity, created black- African as ethnic minorities. The black-African groups after becoming a minority, in the process of state formation, faced identity shifts because their loss of political power and separation from their larger ethnic groups that were incorporated into the state of Senegal. Black Mauritians were put on a separate developmental path that their Senegalese co-ethnics. They formed a unique identity based on their relationship to other in the nation of Mauritania, developing a connectedness to categories and counter-constructed categories. The saliences of black- African as an identity grew as a unifying factor over the unique tribal groups (Pulaar, Wolf, Soninke, etc.). The Mauritania nation-building process increased the salience of identity of these identities and polarized them.

The creation of black Africans as a minority group enabled their down-graded from their previous political superiority, a radically different situation from their colonial standing. The number of black Mauritians in administrative positions was decreased. The essential inversion of power meant that the majority of administrative position came to be filled by ethnically Beidan giving Beidan ethnic group power of the country. This led to structural asymmetries and inequalities. These inequalities created grievances amongst black Mauritians and contributed to the emergence of violent conflict between deprived black Mauritians and Haratins, who

had the backing of Beidan ethnics. This is Gurr's decremental deprivation model, where the most virulent form of deprivation is when groups who once had status, lose it.

4.3.2 Boundary Changes in the Nation Building Process

The division of the AOF into multiple nation states, in the 1950s, involved the division of territory. The seemingly arbitrary territorial divisions the AOF created different administrative entities that would become modern nation states. Mauritanian territory that had formerly been ruled over as an extension of Senegal became an independent state. The state included the hinterland territory that had been ruled over using indirect rule and the north bank of the Senegal river ruled more or less through direct rule. This division using the Senegal river is one of few instances in Africa where a natural border was used as a dividing line (Swain). While this seems very practical, it is no less of an arbitrary divide as any of the others made in West Africa (Zartman). The utilization of the Senegal river's center line as the division between Mauritania and Senegal did not consider the existing geographic distribution of groups (Le Quesne). This had a profound impact on the how geo-political identities evolved in the basin.

The use of the center line of the river created questions as to which country and people owned small islands in the middle of the river and created minority ethnic groups in each country. The line divided ethnic groups creating Mauritanian and Senegalese demographics of tribes that grew into different identities as they went through the nation-building process. The Hal-Pulaar ethnic group that existed in the middle Senegal River Valley were divided by the nation building process.

Many of the Hal-Pulaar on northern bank of the middle river valley felt a strong pull toward their southern bank brethren and actively described themselves as "traditionally Senegalese" (Nicolaj). The majority of these "traditionally Senegalese are Mauritania Hal-

Pulaar who had strong kinship bonds with Senegalese Hal-Pulaar and former the basis for the agricultural community in the middle river valley” (Nicolaj). Though divided by national boundaries, the residents however did not feel as though they were separated. “The population form a community which is neither Mauritanian nor Senegalese, a community belonging to neither nation, yet a community that is part of both countries, a potential if not ‘de facto’ state within a state” (Nicolaj 49). The official border between Mauritania and Senegal being the middle of the river bed was more fluid than actual at its imposition. The Hal-Puular cross back and forth, treating the border as more of a technicality than a strict delineation (Nicolaj). The groups on either side form a minority within the nations: in Senegal the Hal-Puular are an ethnic minority while in Mauritania they are a racial minority and ethnic minority that became part of the nation of Mauritania had previously been favored by the French colonial government during colonization.

The formal separate of Mauritania and Senegal into two administrations was congruent to the advent of the one-man-one-vote system gave rise to Beidan political identity⁷⁴ that had not really existed prior to decolonization because the nomadic tribes had retreated into the hinterlands and were loosely government through indirect rule. The imposition of this voting system inverted the power dynamic between ethnic groups and created a political power vacuum that was readily filled by people of Beidan Political interest. Mauritania is one of three cases in Africa when the ruling class prior to decolonization became an ethnic minority and the

⁷⁴ Beidan political identity is emergent of the formation of the nation state of Mauritania at decolonization. “the majority of the Mauritanian people, having never known any real form of national identity or non-tribal loyalty (much less social mobility), instead remain exclusively wedded to extended tribal and familial relationship” (Pazzanita) giving the group, in its infancy, a pro-Arab, ethno-tribal Arab-Moors demographic. The group came to power with the advent of Mauritanian Constitution and the one-man-one-vote system. The system favored the majority population of Mauritania which was of Arab-Moors decent.

subjugated majority class became ruling elite (Weinstein). This transition of power meant the highly educated black-African people who were given greater access to European resources in colonial cities and were considered assimilated or assimilable, became the minority class. The struggle for power in the political sphere reinforced division between Beidan and black-Africa groups on which colonial identities had been built. It was this juxtaposition between “advanced” black-Africans and “backward” Beidan groups that became the focal point following decolonization. The colonial ethnic resource distribution and competition between the groups fed into perceptions of group-based privilege. The redistribution of power led to the previously dominant sub-Saharan African groups being subjugated when the Beidanization of the country’s power structures took place. This boundary shift altered cross-group relations and served as a building block for threat and threat perception among intra-state Mauritanian ethnic groups fueling direct and indirect violence. The effects of the role reversals of such fortunes when policies change and deprive certain ethnic groups of their status is tied to Gurr’s model.

With decolonization, there was what Tilly calls a social boundary shift whereby, groups separate themselves from others. In Tilly’s *Ties that Bind... and Bond*, he discusses the key elements of social boundary: the stories about people on either side of the boundary, the boundary itself, the stories across the boundary, and shared stories. Political change, in this case, the nation-building process, becomes a mechanism for shifting the boundary by creating opportunity for exclusionary practices. Mauritania was in a situation where, “prior to independence, what is now the minority ethnic group enjoyed political and social hegemony over the more numerous one” (Weinstein 5)⁷⁵. During colonization, the black sub-Saharan African

⁷⁵ Hegemony, as laid out by Gramsci, is the dominance of one group over others (Bates).

population that was in power was geographically divided with the formation of the unique state of Mauritania and the unique state of Senegal. This created black, sub-Saharan African population as the minority to the Beidan. The sub-Saharan African ruling elite were subverted by the ethnically Beidan, “backward” population.

This translates to the majority, ethnically Beidan group of Mauritians being enabled a greater number of political positions through the advent of a one-man-one-vote system and the minority now minority black-African population of Mauritania becoming a minority population and political minority through the nation-building process. The emergence of Beidan political identity, the beidanisation of political structure, and public standing created feelings of fraternal and temporal deprivation (Gurr) in the black-African population who were favored under the colonial system. The black-African population who enjoyed the privilege of European education argued that they should maintain greater representation in government because they were more highly educated (Jourde).

The creation of a modern nation-state and the one-man-one-vote system enabled the majority Beidan ethnic group to take power in the nation’s government in 1958 shifting the power dynamics in the country. With the imposition of geopolitical boundaries, minority groups in the Senegal River Valley were created and the majority population group of ethnically Beidan seized power. The Mauritanian social situation flipped: the previously favored black Africa ethnic groups became subjugated to the Beidan who had been relegated to the periphery during French colonization. Gaining independence from France caused boundary changes and shifts in the ruling structure causing a collective culture shock. The shock strengthened of the “us-them duality” (Tilly) in preexisting identity relations within Mauritania was made more prominent with the emergence of the Beidan political identity. The boundary shift altered cross-group

relations and served as a basis for threat and threat perception among intra-state Mauritanian ethnic and racial groups fueling direct and indirect violence.

4.3.3 Relative Deprivation in Post-Colonial Mauritania

In the case of Post-colonial Mauritania there is a double shift that resulted in relative deprivation of ethnic groups. At decolonization there was the inversion of ethnic power structures. The Beidan ruling elite subjugated black-African populations which included tribal groups in the river valley, Haratins, and *mulattoes*. The new social boundaries based on colonial evaluations of worth of ethnic groups in relation to European strangers perpetuated the construction of social boundaries between groups following decolonization. These boundaries were re-enforced through construction of legal standards and maintained status quo by which Beidan ruling-elite maintained power.

The legal standards created parties of inclusion and exclusion based on ethno-cultural identity by which the black-Africans were excluded from the government. Where previously they had been discriminated by Beidan Arab groups, the disproportionate number of black-Africans under the AOF was the result of ethnic favoring by the French, resulting in growing Beidan grievances. Following decolonization, and the Beidanisation of the Mauritania government, measures were taken by the new government regime to reduce the number of black-Africans in positions of power. Their subsequent relegation to a minority position would again result in new perceptions of horizontal inequality, institutionalized deprivation and a growing frustration and anxiety. Between 1960 and 1978, the number of administrative positions held by black-Africans was reduced from virtually all positions to a representative 20% of positions (Jourde). Representative meaning that black- African controlled a number of administrative positions comparable or proportional to their population demographic (Parker). This set the

precedent of removal of black-Mauritanian power. The percent representation was then further diminished in 1987 when the Mauritanian government removed the black-Mauritanians from government and military positions (Parker et. al).

4.3.4 Beidan Social and Political Hegemony

In the ‘to-be’ nation-state of Mauritania, the black-African population of the River valley was created a minority in comparison with the Beidan population to the north. The Beidan historically had viewed the black-African population to the south as “would-be slaves” (Weinstein) that were formerly raided and conquered by the Beidan emirates. Then with the entrance of the French, the Beidan lost their ability to conquer the people of the Senegal River valley because of the pacification by the French and the territory former conquered by the emirates had been given back to the black-Africans.

In the first instance the French colonial government had handed over ruling power to Beidan groups. The Beidan filled the power vacuum left by the French withdraw and began systematically removed the black-Africans from power causing outrage amongst the highly educated privileged classes of assimilable people. This was precluded by the 1957 manifesto that outlined the French-Maure collusion in the creation of a racist constitution that disfavored black-Africans in the creation of the Mauritanian constitution. Black Africans protested against their removal from power on the basis of their higher education but their calls went unheeded internationally. The reduction of political power of black-Mauritanians in post-colonial Mauritanian was a turn-around from how the group participated prior to decolonization. The struggles within the political system caused conflicting claims to which political identity, the black-African or Beidan, had greater standing and claim to power. The black-African community that had previously hosted much power in the AOF and had greater European standard education

or the now majority Beidan population who had seized power. The more highly educated ‘advanced’ black-African and *mullato* population made for great representation in government because of education (Parker). The process of removal of black- Africans from power was completed in 1987 when all black-Mauritanians were removed from government and military service (Parker et. al).

In 1961, one year after decolonization, the Beidan ruling class made Arabic the national language. This led to an almost immediate second-class status for non-Arabic speakers (Parker et. al), namely black-Africans. In 1979, following the decolonization the Mauritanian government made the move to make Arabic a required language in schools (Parker et. al) deprived the francophone black-Mauritanian community who had been educated under the French system and ethnic groups who spoke tribal languages. This was met by strong opposition from black-Mauritanian groups and in that same year two people were killed while protesting the change (Parker et. al). The change in language in schools limited the possibility for advancement of non-Arab speaking groups, which were mainly black-Mauritanian population from the River Valley and urban black-Africans in previous centers of French Colonial power. This did not however dis-privilege *Haratin*, former slaves who lived in the river valley because this group of people, though they were Arabic-Speaking, were not allowed to go to school.

The second instance of in which deprivation was present was following the droughts of 1968-1973, 1976, and 1982-1984 ((Coupe 1990) in Magistro). these droughts, causing the deaths of over half of the cattle herds, forces the migration of large numbers of Beidan herders to cities because of loss of livelihood in the hinterland. Estimation say that the nomadic population drop from 80—85% of the population between 1965-1970 to approximately 17-23% between 1980-

1985 precipitously the urban population rose from 2% in 1950 to 40% by 1990 ((Andriamirado 1989a, Baduel 1989) in Magistro).

The inability to achieve and maintain herd sizes during and after the period of sustained drought relative to the period prior to the droughts created a sense of deprivation among nomadic herders. They were not able to achieve what they previously would have because drought limited the production capacity of the land was severely reduced. A result of the droughts was the necessity-based migration of herders into urban communities due to the death of capital assets, i.e. cows. The sharp increase in internally displaced peoples settling in urban centers brought about a shift in population distribution, increasing concentration of ethnic groups in urban centers, mainly in Nouakchott, constraining social structure. Former herders had to adapt to the urban setting where they were at a competitive disadvantage having minimal education and job training in the hinterland region prior to entering the urban setting.

4.4 Environmental Scarcity and Mauritania

Congruently with the declaration of Arabic as a national language, the country found itself in the middle of drought. Climatic change is a threat multiplier and took its toll in the middle Senegal River Valley. The erratic rainfall during the 1970s and early 1980s caused great environmental insecurity in the region. The green water resources scarcity increased food insecurity and is congruent with an increased livestock death rate, both of which threatened the livelihoods of ethnic groups in the middle Senegal River Valley.

The scarcity brought about decreased agricultural production capacity of the land causing famine, loss of livelihood, and stunting the economy of the country. The country of Mauritania like the other riparian states of the Senegal River, is an agrarian state. An agrarian state is a state with a largely agrarian society in which the community is engaged in agriculture as the primary

means of economy. Agricultural production and maintenance of crops lands hold a large proportion of the states total production. Water reduction drastically impacts the production capacity of the land because green water resource is crucial for plant growth, both wild and domestic.

The great southward shift in the 150mm *isohyet* during the 1970s reduced the carrying capacity of land and occurred mainly in the zone where cattle were most numerous. This result was the reduction of cattle herds by approximately 55% (Magistro). In their desperation to prevent the starvation of their animals, herders topped shrubs and trees to provide food. The process of topping a plant is the drastic cut or removal of mature branches that leave the plant with open wounds making it subject to disease and death. The practice of topping the meager amounts of existing vegetation results in human induced reduction of the plant life. The practice of topping shrubs contributes to desertification by killing young plants permitting soil deflation by dust and sand storms (Magistro) because there are not roots to hold the soil. The process decreases plant cover, increasing erosion which furthers decreases in rainfall, increases desertification (Anaya) and expediting climate change.

4.4.1 Climate Change and Ethnic Interaction

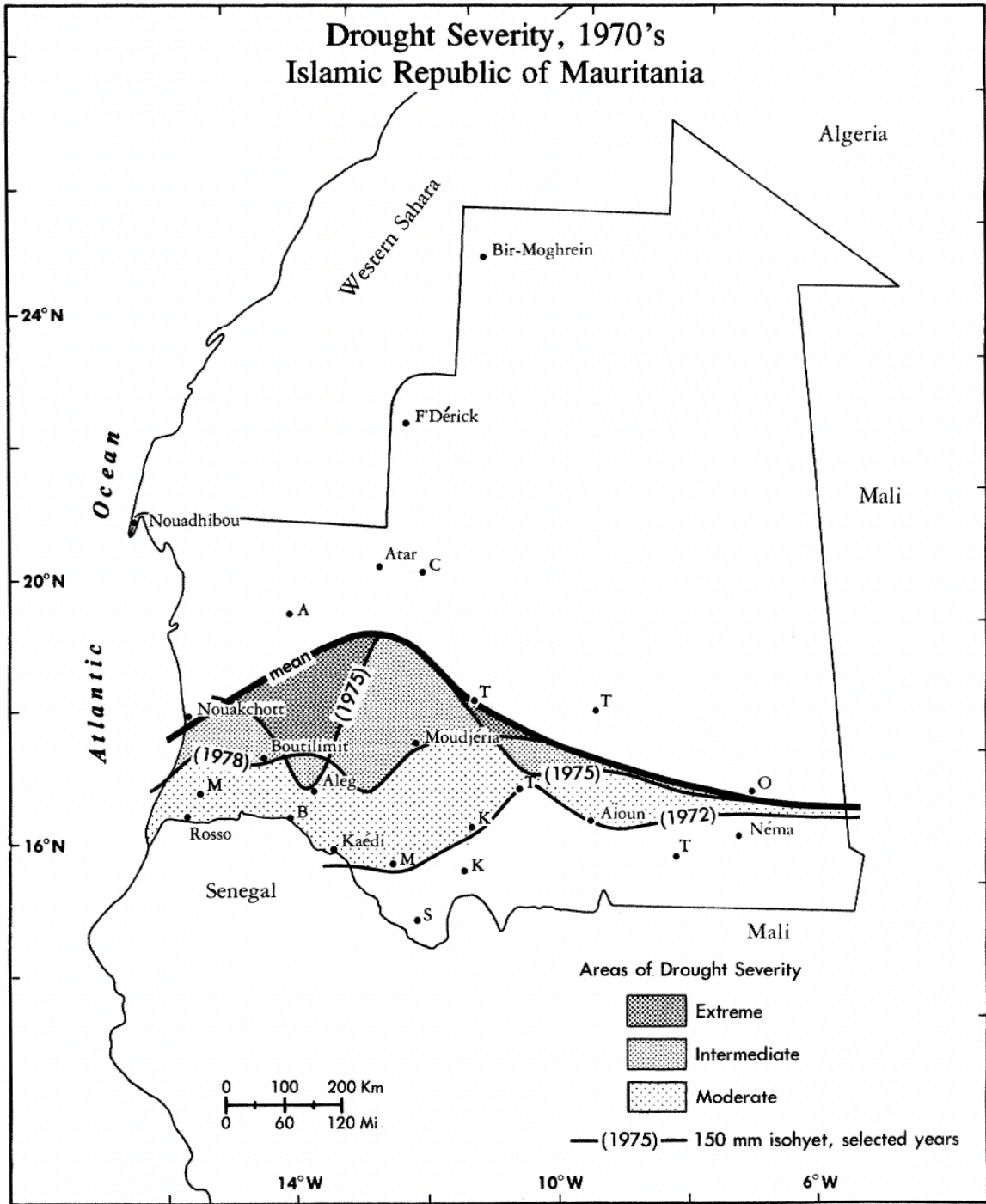
“Climate change will act as a 'threat multiplier' that makes existing concerns, such as water scarcity and food insecurity, more complex and intractable and presents a tangible threat to [national security interests]” (Brown 1142)

Consecutive droughts in the 1970s caused repeated, untimely early southerly migration of nomadic tribes and their herds. The lack of rains forced herders to graze their animals further south earlier in the season than in previous decades, increasing competition for green water resources in the shortened rainy season. Beidan ethnic groups came into untimely contact with the southern black Mauritians in the Senegal River Valley. Beidan nomadic herders, charged

their herds south to access fodder and came into contact with sedentary agriculturalists, typically of black African descent, in the middle river valley. The Beidan permitted their herds to graze on the planted fields of the sedentary agriculturalists. The fields' yields, having already been stunted by the lack of green water, were further reduced by the fields' consumption by the domestic herd animals. This interaction increased pressure in the middle valley between Beidan nomadic herders and black-Mauritanian agriculturalists.

The practice of grazing herd animals on agricultural lands is a traditional practice of resource sharing. Following the end of the rainy season, a nomadic herder would migrate with their herds south to southern pastures (see figure for visualization). In the off-season, the herds would graze on the remnants of the harvest. This served a dual purpose; it gave fodder to the animals and the dung from the herds would fertilize the earth. This system of renewable resources was a system of reciprocal advantage of overlapping interests. The herds were fed during the cold season and the fields were fertilized by the defecation of the animals.

The naturally unequal resource distribution in the country was accentuated as the rainfall shifted southwards during the droughts. The area around the river had favored rainfall conditions meaning that the black-African ethnic groups who lived there enjoyed greater access to rainfall. By virtue of the location, they also enjoy greater access to blue water resource via the Senegal River and via the yearly flooding which increased green water resource. This serendipitous distribution of resources constrains the capacity for nomadism and favors the river valley agriculture. As seen in Map 6 drought severity in the 1970s in Mauritania was more favorable in the southerly areas along the river where rainfall was more abundant. The areas of most severe drought are areas of where migratory herders hold their summer camps.



Map 6: Drought Severity, 1970 (Key for map is under Map 4) (Source: Vermeer)

Beidan nomadic tribes were disadvantaged by the erratic rainfall and green water scarcity. Their traditional settlement pattern and way of life implores them to follow the rains on the semidesert and steppe. The extreme and intermediate drought areas coincide with areas primarily

occupied by Beidan herders. This decreases the amount and access to fodder for their herds. The shift in rainfall to the south meant that to feed the animals, the herders had to follow the rains and did so right into the planted fields of the traditionally black-African, sedentary agriculturalists.

4.4.2 Agriculture and Economy

“The strategic importance of water as a primary and secondary source of economic development places it on the frontline of national interest of nations. Irrespective of its quantity, if properly managed, can be a veritable resource for economic growth and development” (Ani).

In the time between the end of the drought period in 1984 and 1989 Mauritania experienced a period in which water resources constraint induced agro-hydrological development and shifted agricultural policy. The food production in the country was limited because of green water scarcity. To compensate for the decreased water demographics the country increased its import of virtual water and decreased their export of virtual water. They were importing food products to compensate for the decreased capacity to produce for themselves the food goods needed to sustain the population.

The basin countries were in the process of building the Diam and Manantali Dams which shifted the focus in agriculture from rainfed, recessional agriculture to irrigated agriculture because the regulation of season river flows enabled year-round access to blue water. The shift from rainfed to irrigated agriculture requires a sizable initial investment in irrigation material (such as primary and secondary lines and a pump to move the water from the primary location to the fields), in the labor to install the and training in maintenance to ensure the sustainability of the irrigation project. The irrigation construction cost alone was estimated to be \$25,000 - \$40,000 ha⁻¹ (Magistro and Lo). “The projected expansion of irrigation schemes since operation of the dams in 1987 to 375 000 ha at an annual rate of increase of 5000 ha has fallen far short of

initial expectations” (Magistro and Lo 141)⁷⁶. By 1988, 16,856 hectares of irrigation had been developed in Mauritania falling short of initial estimates due to poor investment in the sustainability of aspects of the projects. Still a sizeable increase from relatively zero to 16,856 ha.

Haratin black Mauritians in the eastern river valley had their land expropriated by Beidan elite becoming refugees of human-induced, environmental scarcity. Pushed from their land, they were forced to migrate. They came into contact with the refugees the drought period as they entered urban centers. This created a poor social climate with the previous refugees who had been their longer and with the local populations. In the migration there was a number of Haratin who migrated west into the middle Senegal River Valley and came in contact with Hal-Pulaars as they move eastward. The social dynamic between the Haratin and the Hal-Pulaar differed from that of the experience in the cities. In the case of the east-migrating Haratin they were coming into contact with fellow black African ethnic groups who had not been formally enslaved and considered to be property. This kind of violence differed from interracial violence, as these violent conflicts resulted between black African and native settler groups in the middle river valley.

Agro-hydrological developments encouraged a more efficient use of blue water resources and changed consumption patterns. The advent of the water infrastructure projects in the river valley shifted the land resource consumption from a traditional multi-person or group-based system to a single person or single owner system. The single person ownership system under-utilized water resources by leaving fields unused. In the tradition system developed in the basin, the fields were utilized year-round by a variety of people for different uses from field drops to

⁷⁶ The size projection for the irrigation project at maximum capacity would irrigate an area 11.86 times the size of the island Malta utilizing the 2018 report by the World bank group that states the size of Malta to be of 316km²

gardening to animal grazing. The single person ownership system increased incompatibility of water sharing by limiting the use. This shift was incentivized by economic gain and re-enforced by law in which the ethnically Beidan used their power in government to grab land from black-Mauritania residents in the river valley.

Finally, the notion of security and interdependency that is tied to water sharing systems specifically to international water-sharing systems is an indicator for why the international aspect Senegal Mauritania conflict was short lived and the internal aspects lived on. The possibility of engagement with multiple international actors within the basin decreased the propensity for conflict. The economic interdependence of Senegal and Mauritania increased incentives for restoration of relation. Additionally, the restoration of relation meant the installation of the hydroelectric components of the dams could be completed. The small-scale aspects of a conflict increasing the propensity for violence is as discussed by Priscolli and Wolf.

The increase in rainfall following the drought period increased propensity for violence. This was tied to a period of increased institutional distrust as the government disrupted existing water sharing system and the ethnically Beidan elite enable land grabbing practices via instillation of law. In the Senegal River Valley following the Diam Dam and filling of its reservoir was a drought-response. The laws that were created following the water-infrastructure project created human induced scarcity.

4.4.3 Environment and Social Tension

The absence of water resources in Mauritania increased socio-political intensity and continues to increase the intensity as climate change has systematically reduced rainfall. Acute issues of inadequate access and unsustainable management practices of water resource threatened to undermine the livelihood of people on short- and long-term bases. In the short term

Beidan herds during the drought period, were radically decreased in number, causing the movement of Beidan herders to cities in a mass rural-urban migration. This radically changed the social dynamics in the country.

In addition to the latent social impacts of the rural-urban migration, due to the green water scarcity, additional stress was added to the equation because of the technological innovations in agro-hydrological sector. The environmental pressures brought about the increases in water infrastructure in the Senegal River Valley that was meant to combat the ecological effects of drought. The river valley production was reduced in the time of drought because, aside from the rainfed agriculture that had existed, there was a decrease in blue water river fed irrigation agriculture. Though the amount of river fed agriculture was relatively small in comparison the rainfed agriculture, it was still impactful. The flow of the Senegal River during the droughts was drastically reduced causing less than normally flooding of recessionary farm lands. The drastic reduction in water reduced the production capacity of the country forcing it into famine and forcing the import of virtual water, in the form of food products.

The Diam and Manantali Dam projects were built and large-scale irrigation schemes that took advantage of the regularized river flow. The technological developments then encouraged revenue-based agriculture and incentivized the move from multiple stake-holder resource holding to single person/owner use. The shift from the multiple person stake-holdings in resource utilization meant a shift from the traditional system of land sharing to a European visage of single ownership.

The increased the incompatibility of water resources sharing and land use created conflicting interests. The possibility for economic advancement brought Beidan investors from the cities to the river valley looking for economic gain. The planned agriculture allocation to

meet future demand had shifted and was politically driven as self-interested parastatal organizations owned by Beidan government officials were contracted to build water infrastructure projects. Black African residents of the valley - Haratin, Hal-Pulaars, Wolof, etc. - who used the land for subsistence farming, had their lands expropriated and the people were displaced. The latent human dimension of the ecological change was increased environmental insecurity via competition for land resource and the internal displacement of black-African groups.

The purposeful, asymmetric distribution of resources was caused by human-based relative power dynamics in which Beidan hegemony in the Mauritanian government and economic spheres enabled the competitive exclusion of black Mauritians in the Senegal river basin near water infrastructure projects. The Diam Dam in the western part of Mauritania at the mouth of the Senegal River, is the largest project that falls within the sphere of this case study. The Dam increased access to blue water resource for the area surrounding the infrastructure and increased competition for resource based on the likelihood for economic gain. The government enabled ethnically Beidan businesses to grab land from the Haratin, (the black Mauritania, slave class of Beidan), who were living and making their livelihood from agricultural production in the region.

In both cases of water scarcity, green water and blue water, both accidental and purposeful, Mauritanian environmental refugees were internally displaced. The populations were displaced and social relations were disrupted because of reduced agricultural production and ensuing economic decline. The reduced agricultural production, economic decline, population displacement, and disruption of regular and legitimate social relations are Homer-Dixon's driving factors for ecologically driven conflicts (Homer-Dixon 1991). The migration of people

alters society's markets and economic activity causing ethnic clashes; ethnic clashes like those that arose in Mauritania in the late 1980s. The social impact of environmental change resulted in violent intra-national, inter-ethnic conflict in Mauritania and evolved into inter-ethnic, international conflict in 1989.

In the Mauritanian case, uneven distribution of green-water resource access threatened to un-settle nomadic livelihoods by creating regional instability and heightening anxiety among the Beidan groups (Vium). The lack of green water resources was due to erratic rainfall, which as a consequence, put pressure on the herding societies who move their animals with the rains across the Sahel. The resource's greater distribution to the south meant that the Beidan herders had to move their herds quickly, causing the animals great stress that resulted in their deaths. The consequences of these shifting patterns were devastating to nomadic herding communities. Between 1968 and 1973 the drought condition heavily affected Mauritanian Sahelian lands with rainfall conducive for sustenance of cattle herds. As a result, the number of cattle decreased from 2,500,000 to 1,150,000 head, a reduction of 55% (Plan de Développement Économique et Social 1976-1980) in Vermeer). That is a lot of cash asset that was lost to the nomadic Beidan herders, and resulted in a mass exodus of herders to the cities and to some to the Senegal River Valley radically changing the socio-political dynamics of the country.

Disputes had begun to break out along the river valley. Competition over green water resource, framed as competition over grazing rights, were popular as Beidan herders brought the remaining cattle south in search of fodder. The reduced land production capacity was taking its toll on their herds and on planted agriculture. The country's economy was in down turn and the government had a plan. The scarcity of water resources brought about large water infrastructure projects in the region. The largest infrastructure project was the construction of the Manantali

and Diam Dams. Arrangement surround these blue water infrastructure projects were made with international financing and the subsequent water infrastructure projects that utilized the regulated flow and waters from the reservoirs, were built by parastatal organizations and foreign investors. Accompanying the scarcity were multiple instances of conflict over cattle grazing on planted agricultural lands. A series of land tenure policies that shaped the social interaction around the finite resource. According to the Land Tenure Institute report on *Land and the crisis of nationalism in Mauritania* there was a series of land tenure policies that began in the colonial period and contributed to the 1989 conflict. These policies overlapped with traditional land utilization schemes and ethno-national politics brought about conflict.

4.4.4 Water Infrastructure and Land Tenure Policy

The Diam and Manantali Dam were conceived in 1972 in the midst of drought in West Africa. By 1980, 10 years of had brought about countless conflicting claims to grazing rights and to land resources as the remaining herders fought with residents of the Senegal River valley for the fruits of green water resource and with the promise of regulated blue water flow on the Senegal River by major water infrastructure projects, the future looked promising. After the search and attainment for exterior financing, the construction of the Diam and Manantali Dams began in 1981. The dams underway, conflict was already afoot.

Competing claim to land and access to land was the mode. Just months before the country was officially a body of legislation was passed that included ambiguous clauses that left uncertain the question of what land belong to who. The Décret 60.139 of 2 August 1960 (see Annex 2 for original French and translation in English) had simultaneously affirmed the right of the state to expropriate lands that were vacant or undeveloped for 10 years and the customary

tenure rights. This established the principle of indirass⁷⁷. The government system for expropriation for public utility was simultaneously set up within the same decree. It enables the government to expropriate any land for public utility to include land that fell within the customary tenure system. In provision to this, the law states that no individual or collectivity may be forced to give up rights to their lands except for the use of public utility with just compensation to be received.

The increased tensions in the valley had raised the issues and in 1980 a commission was created to study the land tenure issue. After nearly 10 years of drought conditions lands that would have otherwise been utilized during years average rainfall had been left fallow due to the lack of green water. The report published by the commission note that in most cases the dispute resolution proposed by the courts had not been accepted. Peace was maintained by detachment of National Guard (Parker et. al). Multiple instances of disputes between Haratin and their former Beidan masters happened in the middle region of the River valley in the Barkeol Ghabra⁷⁸. Barkeol Ghabra is located due east of Aleg and Due south of Moudjéra. This area of land falls within the border zone between the Steppe and semi-Arid Dessert region as seen in figure __ Climatic Zones of Africa with a focus on Mauritania. This area hosted a larger number of cattle and was one of the moderate droughts impacts as seen in figure __ Drought Severity 1970s. The Beidan claimed that “their tribe had traditional influence in the zone and the [Haratin asserted] that they and their ancestors had cleared and worked the land as free Muslims and so had

⁷⁷ “Maliki shari’a established a ten-year period for the principle of indirass (expiration of the rights due to the passage of time) in favor of the Islamic community – an individual or group would be free to use the land” (Parker et. al 12).

⁷⁸ The location deep within the agricultural production zone begs further questions. The source from which this example was pulled does not list the dates of the disputes therefore it is not possible to extract within which drought cycle they occurred and therefore cannot aid the setting up a timeline. The time of year and the exact years of these disputes would help to extrapolate the severity of need of the herders as they moved deeper into the river valley.

established the rights to the fields” (Parker et. al 13). This dispute like other is over the grazing rights for Beidan cattle on Haratin planted lands.

The *El Hor* Movement is reflected in this dispute. The movement consisted of Haratin, black Mauritians who “argued that they had rights as land holders just like everyone else” (Parker et. al 13). This was not a prevailing opinion at the time. Although slavery had been officially abolished through law twice, the practice of keeping slaves was still socially accepted. Haratin were still considered to be slaves and therefore, by definition, they could not own land.

Three years after the commission had published its report on the state of land tenure issues in Mauritania, the government of Mauritania made into law Ordinance 83.127 of June 5 1983. This article officially abolished traditional land tenure in Mauritania. It affirms that “land belongs to the nation and to every Mauritanian without discrimination” (article 1 – see appendix for full wording). Furthermore article 6 sets the precedent for the redistribution of lands to be the responsibility of administration. Article 7 Collective lawsuits concerning land are officially abolished and all collective lawsuits before the court and pending were to be struck from the roll. Article 9 concerning “dead lands” or lands that had gone unused, by right of indirass, original proprietors and their heirs can oppose the rights to the land but only if the land has not be registered.

The decree that followed, Decree 84.009 provided the implementation strategy for 83.127 of 5 July 1983. Through article 2 of this decree, the level of development for a plot was standardized to include the constructions, crops r dikes for retaining water. Through article 12, the government of Mauritania set about settling the appropriate figure who would become the mediator of disputes when the redistribution of lands was not able to be settled. The articles set the precedent for the formation of a committee of persons that include the préfet, the magistrate

for the department, the head of local militia and a representative of the local agricultural extension service (Parker et. al). Finally, Article 21 discussed the rights of a collective to land. It states that any land that is to be retained for the purpose of collective use must become a regularly constituted cooperative in which all members have equal right and duty.

By eliminating the traditional land tenure system, the government was changing the hydro-politics of the country on multiple scales. The change in legislation opened the door for government civilian land grabbing and civilian to civilian land grabbing. The latter of the two between the Beidan and the Haratin black Mauritians and the former set up the right of the state to take land from pretty much anyone, anywhere, which would be used to expropriate Haratin land near the Diam Dam and reservoir and land from other black Mauritians in the river valley near any of the parastatal water projects that would be developed following the completion of the dam.

These ordinances 83.127 and the Decree 84.009 occurred in the same year that the country of Mauritania was declared a disaster zone. Drought had drastically reduced the carrying capacity of land, reducing crops production and herd sizes. The sharp decrease in crops meant starvation for the people of the country because subsistence farmers could not produce enough food to feed themselves or enough to sell at market to feed the urban consumer. With reduced herd sizes, the nomadic peoples of the north had no animals to sell at market in order to purchase food. International aid was requested by country to increase virtual water imports to compensate for green water scarcity. Virtual water is water that is used to manufacture a product that is exported by one country and imported by another.

To understand the impact of Ordinance 83.127, it is important to note the internal political dynamics of the country at the time of its coming into force. At this point, Haratin Black

Mauritanians were fighting for the right to own land and were being systematically denied by the Beidan ruling elites. This extended to black Mauritanians who the Beidan saw as their would-be slaves. The black Mauritanian presence had been reduced in government to a representative proportion. Arabic had been formally made a national language deprivileging francophone Africans. The region was already unstable and anxious because drought pressures had ruined crops and increased food security so much so that the whole country was declared a disaster area in this same year as Ordinance 83. 127 was put into effect. The whole country was in ruin as a result of the 1982 rainy season and even poorer still in 1983. Rainfall was only 27% of the average rainfall (for 1941-1970) (Derrick). The country sought aid from international sources to meet the basic human needs of the people.

The first article of the Ordinance 83.127 of the 5 of June 1983 concerned “the right of every Mauritanian without discrimination of any kind” to land. That this first article of the ordinance addressed the issues of discrimination against black Mauritanians is interesting. The racism in the country had been published internationally with the first instance being in 1960 with the manifesto written by black Mauritanian academics, accounting the instillation of racism in Mauritanian constitution. This clause gets at the issue of slavery and discrimination as these issues could have been deterring issues for aid reception as suggested by Gerhart as the country sought international aid to supplement the food shortages plaguing the country.

The Second article of Ordinance 83.127 recognizes and guarantees of private property that contributes to economic and social development addresses the right of existing owners especially those of registered lands. It is important to note here that lands registered with the government were few at this time and the lands that were registered belonged mainly to Beidan elite who understood and utilized the process (Parker et. al). This meant that the government was

reaffirming the rights of its elites to land. Subsequently article 5 of Ordinance 83.127, reaffirmed the rights of chief and notables to lands that they had pervious registered in the name of their collectives, which was few by comparison. Furthermore, this Article 5 was preceded in order of importance by Article 3.

The third article of Ordinance 83.127states, “the traditional land tenure system is abolished.” This abolishment elimination of the tradition al tenure system disrupted the chronology of green water use and heightened anxiety. The country was now over 10 years into drought. Lands that would have typically been used had gone into disuse and the infrastructure projects on them had been stalled or not started because they lacked sufficient green water resource to be useful. The traditional tenure system accounted for periods of drought, had measures in place to account for the disuse of the land, and means for determining the who the land would be used for providing an increase in rainfall that would make the land useful. These lands that had been of limited utility, due to green water scarcity, and were protected via the traditional land tenure system were now under question.

Following this security is further put into question in Article 6 of Ordinance 83.127 which states that collective lands that have legitimately acquired f and initially confined to agriculture purposes and that benefit of those who have “participated in their initial development or contributed to their continued exploitation. Individual ownership is normal. When there are no arrangements for division, and when the social order requires it, redistribution will be arranged by administration.” This article can be applied to the issue of lands in the valley under cultivation of Haratin who were by law “former slaves” but under social practice were not. This law then enabled land grabbing by former slave masters, Beidan. The Beidan through their majority power in administration use this to expropriate land from the Haratins who were farming it.

Furthermore, article 7 of Ordinance 83.127, collective lawsuits were to be struck from the courts roll and to be made inadmissible. Meaning all tribe rights to lands that were group owned and operated under the traditional system were to be made basically mute. This restricted the ability of black Africans to fight for their tribal lands as the groups had farmed the lands as groups and redistributed land yearly according to the familial dynamics and rainfall patterns, the land had not the one owner nor one cultivator.

Finally, article 9 of Ordinance 83.127 of this ordinance pertaining to 'dead lands' under the right of indirass would become property of the state. This equates to all marginal lands in the river valley becoming state property. The land in years of average or mean rainfall would have enough green water resources to be productive but this land would have gone without use due green water scarcity. According to the Land Tenure Institute Report the justification of the shari'a principle of indirass is peculiar because, "the Senegal River Basin is that the population, though muslim, [had] not traditionally relied on the shari'a courts to settle tenure disputes" (Parker et. al 15). The paper further points out this particular article can be used to to avoid payment obligation under the guise that the land was unused prior to its expropriation (Parker et. al). This means that they government could obtain an and all marginal lands that were not cultivated via traditional means during the anteceding drought period.

Article 12 of Decree 84.009 set about creating a biased group of people to reside over land distribution decisions. The committee considering that at the time the number of black Mauritians in power was small in proportion to that of the Beidan. The Beidan control of the government meant the ethnic group enjoyed power. They could extend power to other member of their group and maintain their own power via patronage system.

Article 21 of Decree 84.009 made the collective tenure possible under one mechanism, cooperative in which all people have equal rights and duties. According to the Land Tenure Institute Report, the socialist ideology behind the equality of rights and duties, is inapplicable to the Senegal River Basin because the it is not in stride with the common property system that was previously used. The common property system has decidedly unequal rights and duties associated with the risk management strategies that were developed to deal with the arid condition of region.

4.4.5 Infrastructure Projects and Social Implications

The changing water demographics demanded new priorities. Traditional green water management institutions while operational were legally barred as the government forged a new international water institution, the *Organisation pour la Mise en Valeur du Fleuve Sénégal* (OMVS) in 1972. The tri-national river basin commission sought to combat the effects of the persistent Sahelian drought as it impacted Senegal, Mali, and Mauritania (Alam). Through a river basin development initiative, the commission's mission was to build and manage a system of dams that would produce hydroelectric power, mitigate flood and drought and create navigable waterways to inland ports. By the mid-1980s the Diam and Manantali Dams were completed, “[stabilizing] the seasonality of stream flow, enabling a double crop season of rice harvests on irrigation schemes during the year” (Magistro and Lo) and enabling great social disruptions as it combatted environmental change.

The building of the dams and the subsequent reservoirs behind the dams, displaces people from lands because the filling of the reservoir raises water levels behind the dam, covering land with water. The dams and reservoir, increase access to fresh water by blocking the salt water intrusion into the river. By blocking the intrusion of salt water, the reservoir's fresh, blue water

increased agricultural capacity of the country. Through irrigation schemes agricultural production near the dam and reservoir increased. These projects were funded by parastatal agencies in the eastern river Senegal River Basin. The reservoir filling internally displaced people, mainly black Haratins who lived within the area along the river at which the water level rise came to cover land. Further people were displacing when the possibility of increased revenue streams caused an increase in land prices which drove more of the area's traditional settlers from their lands. Additionally, Beidan land grabbing practices increased following a shift in land tenure policy in 1986 enabling Beidan government to expropriate lands for government use in the interest of development of the country enabling further internal displacement of peoples. The displaced Haratins migrated eastward into the middle Senegal river Valley and into land that was settled by the Hal-Pulaar black sub-African ethnic group.

In tune with the construction of the dams in combating environmental change, the new water infrastructure adds to "Wittfogel's (1956) thesis [stating] that development begets large water infrastructure, which begets large bureaucracy, which begets control, which begets authoritarianism" (Priscolli and Wolf). Mauritanian investment in the collective infrastructure, in order for the state to develop and grow, created opportunities for greater financial gain for people living along the river. The dams meant that blue water would become more readily available for agricultural purposes with less risk increasing immediate returns on investment for landholders who participated in agricultural practices. Using land reform policy to change and exclude minority groups from the system, land along the river was expropriated via legal means and redistributed. Traditional inhabitants had their land taken and the land was given to wealthy, favored parties from the now crowded cities.

This land reform intervention, established in 1983, abolished the traditional land tenure system in Mauritania and enabled later territorial administration to enact decrees and ordinances. The law lacked a “definition of the means to materialize the recognition and delimitations of customary rights” (“Mauritania – Context and land Governance”) contributed to unrest and conflict in 1988-1992 because it removed traditional modes of resource cooperation, destabilizing the arid region. The policy lacked measures to ensure fair and equitable resource distribution inducing scarcity and marginalizing minority groups. Resource capture by the majority ethnic group became an impetus for conflict by exacerbating existing social tensions. In effect, policy and institution building enabled identity-based asymmetric resource distribution.

Mauritania had an inherited social stratification that privileged certain groups over others. Several cycles of different administrations saw these privileges overturned and roles reversed. This led to heightened anxieties and mistrust between ethnic groups increasing social tensions. Mixing in climate change, renewable resource scarcity, and policy change culminated in the explosive events of 1989 leaving 90-200 dead, approximately 700 injured, and thousands displaced on either side. With no official records permitted to be made in Mauritania, the magnitude of the conflict is concealed. Long seen as a conflict about land tenure, this chapter was dedicated to exposing the roots causes of the 1989 conflict, and linking policy to issues of asymmetric resources distribution and identity politics.

Chapter 5: Thesis Conclusion

“Environmental scarcity does produce economic deprivation, and this deprivation does cause civil strife” (Homer-Dixon 24) (environmental scarcity and violent conflict)

This thesis examined the root cause of the 1989 conflict between Senegal and Mauritania where the cross-national affinity of Hal-Pulaar ethnic groups led to the events that came to be known as Black Friday and the Mauritanian Hunt. The events of Black Friday occurred in Mauritania leaving 40 people dead with estimates as high as 200 dead and 700 people injured (Parker et.al.). Mauritania allowed no official counts. The Mauritanian Hunt occurred in Senegal two days later. 50 Mauritians were killed and thousands of Beidan shops were pillaged (Parker et.al.). Following these events, Mauritania and Senegal closed their borders and severed diplomatic ties. While conventional literature has privileged social theories in the discussion of the 1989 conflict, I have taken a different approach by looking at the root causes of the conflict because the conflict is much more complex.

I demonstrate the 1989 conflict was the result of a post-flashpoint issue (ie. drought), in which asymmetric internal allocation of resources in Mauritania triggered violence amongst ethnic groups with a history of cycles of power inversions. Inter-ethnic and inter-racial violence between Hal-Pulaars ethnolinguistic groups and Haratin and Beidan was growing in the years leading up to the 1989 conflict in middle Senegal River Valley of Mauritania. While there are number of different inciting event listed in the existing literature dating back to October of 1988, it is clear that the historically differentiated and stratified ethnic relationships played a role in the conflictual social dynamics.

As different waves of colonization privileged different groups to power, Mauritania developed a ranked and differentiated ethnic landscape. Multiple power inversions brought

different groups to power under consecutive colonization. The first by Arab-Berbers and the second by European French, ethnic differentiation and social stratification, relative deprivation and institutional despotism evolved. In chapter two I discuss social theories, by Horowitz, Gurr and Mamdani, respectively and, in my empirical chapter, I traced the unfolding of identity and how they are linked to resource distribution and environmental scarcity.

The first conquest of west Africa by Arab-Berbers laid the foundation for a stratified society in which black African were forced into the lowest tier of society, the slave class. The assimilated group of Arabic speaking, black slaves, called Haratin were seen by their Beidan masters as property and free black Africans were seen as would be slaves. Haratins, lost their rights free persons which would contribute to social tensions between Haratin and free black Africans in the river valley leading up to the 1989 conflict.

The push for French colonial power and interest in West Africa gave power to black Africans in the Senegal River Valley. French colonial elites privileged black African, Hal-Pulaar ethnic groups to populate the northern bank of the middle river valley. This resulted in Beidan owned, Haratin operated land grabs. Beidan lost out to a traditionally lower cast ethno-racial group, which compounded the outrage at the loss. The Haratin slaves lost their homes to free ethnic groups of similar lineages building anxiety and divisions. The French ushered in a favored class of black Africans, whom they employed in positions of administration in the river valley of Mauritania territory.

An add layer of structural violence, combined with the system of differentiation and stratification, was the colonial implementation of a bifurcated system. As I discussed in Chapter II, the divided system of rule created two spheres of rule: the directly-ruled, civic sphere and the indirectly-ruled, customary sphere. In Mauritanian territory, or territory north of the Senegal

river this meant that the inhabitants of the river valley proximal to French Colonial centers were ruled over by the French administration and subject to policy of assimilation. North of the Senegal river valley was ruled by indirect rule whereby the French utilized pre-existing indigenous power structures to rule. This difference in ruling structure, privileged black Africans and *mullato* (people of mixed European-African decent) as favored, advanced groups. As discuss in Chapter II, this meant that they enjoyed greater access to education, jobs, investment, development, and legal priviledges. Beidan, who traditionally occupied areas north of the river valley were ruled under indirect rule and relegated to the traditional sphere, considered backward, and continued to be ruled through the caste system.

As colonial rule in Mauritania came to an end, however, this power dynamic was once again inverted, placing Beidan ethnic groups in a privileged power position. The French exit of the government structure left a power vacuum that was readily filled by Beidan ethnic group members. The ethnic group established its dominance in the political system and practiced ethnic favoritism. As discussed in chapter II, institutional despotism carried over from the colonial period. Through laws they established categorical inequalities between Beidan Mauritians and black Mauritians. Black Mauritians now included the slave classes of Haratin and the free black Africans who had come to the Mauritanian territory under invitation and protection of the French.

By the time that the territory became a nation state, the ethnic groups found themselves in a radically different place. Through dual colonializations and decolonization reversals of power had turned the systems on its head. Elites of the ruling classes, at each of the inversions, perpetuated ethnic favoritism, differentiation and continued societal stratification. With each inversion of power, relative and decremental deprivation became a more motivating factor.

Through decremental deprivation, discussed in Chapter II, the groups' value capabilities, real and perceived, declines as a result of policy instituted by the ruling elite. For black Africans in Mauritanian territory, this included enslavement to having their land taken, to not being allowed to occupy office in the Mauritanian government. As a result, the black Mauritanians communities/ethnic groups developed a distrust of the Beidan groups based on the historic interactions.

As conflict frameworks have shown, it is a combination of decremental deprivation and horizontal inequalities that are mostly likely to lead to violence. As discussed in section 2.2, this falls in line with Homer-Dixons theory of environmental scarcity conflicts in which he states that the three main sources of environment scarcity are population growth, environmental change, and unequal social distribution of resources. Through my empirical chapter, I demonstrated the how the flashpoint issue, drought, was the source of environmental change and how the historic roots of the conflict led to identity- based asymmetric resources distribution.

The consecutive droughts in in 1968-1973, 1976, and 1982-1984 (Coupe 1990), that brought West Africa to its knees caused great green water scarcity that incurred environmental insecurity. Environmental insecurity spurred a series of hydro-agricultural developments and policies exacerbating existing social tensions. The construction of the Diam Dam, Manantali Dam, their reservoirs, and subsequent irrigation systems inflated demand for land. Land near to the river more valuable because the works increased the production capacity of the land. The installment of the dam increased land grabbing in the western valley where a large Haratine population was living. Haratin land vanished beneath the water level as the reservoir filled and land grabbing practices began. The displaced Haratins were pushed to cities and east ward into

the middle river valleys coming in contact with free black Mauritians, and increasing anxieties and tensions.

Mauritanian Government policy changes encouraged the competitive exclusion of black Mauritians. *Ordinance 83.127* formally abolished the traditional land tenure system eliminated the existing system of cooperation encouraging a switch from multiple party use of land to single person ownership. The traditional system had developed in such a way that it manages renewable resources, ensuring year-round utilization and minimizing competition under average rainfall conditions. The traditional system accounted for rainfall variability and had the capability to deal with extended drought period via a land distribution based on year rainfall.

The Beidan controlled government utilized *Ordinance 83.127* and subsequent ordinances to capture lands. These ordinances systematically discriminated against black Mauritanian communities, most notably by abolishing traditional land tenure systems and confiscating lands deemed to be 'dead' due to the lack of cultivation during the drought period. This land that would, in years of average rainfall, be suitable for agricultural cultivation. These policies resulted in land being seized by the state, and redistributed along ethnic lines, privileging Beidan groups and creating artificial land resource scarcity.

Notions of in-group security and dependency were key to the internal hydro-political dynamics of the Senegal River Basin. Rainfall contributed to the cycles of conflict cycles. Consecutive droughts reduced the agricultural production, induced economic decline, displace populations and disrupted social relations. Heightened anxieties resulted from these shifts in economy and population, contributing to a complex environmental social system in Mauritania that erupted and expanded into Senegal.

This research has important policy relevant implications. While prevailing works on the 1989 conflict have traditionally favored environmental explanations, this thesis demonstrates the pitfalls of falling into environmental determinism. Environmental determinism is when one assumes that the physical environment predisposes societies toward a specific development trajectory. The environmental-social system has deep roots meaning that providing a society with short term climatic fixes will not solve ecologically driven identity conflicts, especially at a sub-national level. Owing to the smaller scale and deep roots, sub-national, ecologically-based conflicts have a greater propensity to violence, especially in periods where rainfall is in excess of one standard deviation from the mean rainfall. If these conflicts are not appropriately addressed will cause new grievances, as conflict begets conflict.

This thesis has added to literature on sub-national, ecologically-based conflict. It connects historic rooted interaction, identity politics, and environmental change, demonstrating the connectedness of the environmental-social system. It is a stepping stone for further research into renewable resource scarcity, natural and human-made, as driver of sub-national violent conflict with the propensity to spill over into the international arena.

Appendix

Appendix A: Mauritania Violations of the African Charter of Human and People's Right

By the African Charter of Human and People's Rights, ratified by Mauritania in June 1986, the country agreed to uphold:

- The right to enjoy rights and freedoms without discrimination based on race, origins, color ... (Article 2);
- The physical and moral integrity of the person (Article 4);
- The right to be tried within a reasonable period by an impartial court (Article 7(d)).

("Mauritania")

Additionally, Mauritania was found to be in violation of Article 12 clauses 1 and 5 which state:

1. "Every individual shall have the right to freedom of movement and residence within the borders of a State provided he abides by the law."

5. "The mass expulsion of non-nationals shall be prohibited. Mass expulsion shall be that which is aimed at national, racial, ethnic or religious groups."

(1986-1989: Background to a Crisis Three Years of Political Imprisonment, Torture and Unfair Trials)

Appendix B: Ordinances and Decrees on Land Tenure Under the Government of Mauritania

Original French:	Translation to English:
<p><i>Décret no. 60-139 du août 1960</i></p> <p><i>Article premier: Les terres vacantes et sans maître appartiennent à l'Etat. Il en est de même des terres non immatriculées au non concédées en vertu d'un acte de concession régulier qui sont inexploitées ou innocuées depuis plus de dix ans.</i> <i>La vacance sera suffisamment établie par l'absence de constructions, cultures, plantations ou puits.</i></p> <p><i>Article 3: Sont confirmés les droits fanciers coutumiers comportant une emprise évidente sur le sol. Nul ne peut cependant en faire un usage prohibé par les lois et règlements.</i></p> <p><i>Article 9: Le régime de l'expropriation pour cause d'utilité publique est applicable aux droits coutumiers. Nul individu ou nulle collectivité ne peut être contraint de céder ses droits si ce n'est pour cause d'utilité publique et moyennant une juste compensation.</i></p>	<p><i>Decret 60.139 of 2 August 1960.</i></p> <p><i>First article: Lands that are vacant and without owner belong to the state. The same is true for unregistered lands or lands which have not been subject to a regular concession and are undeveloped or unoccupied for ten years.</i> <i>Vacancy will be adequately established by the absence of constructions, crops, cultivated trees, or wells.</i></p> <p><i>Art. 3: Customary tenure rights are confirmed when they involve an evident and permanent use of the soil. No one may, however, make use of the land in a way prohibited by the law or regulations.</i></p> <p><i>Art. 9: The system of expropriation for public utility applies to customary rights. No individual or collectivity may be forced to give up its rights except for public utility involving reception of just compensation.</i></p>
<p><i>Ordonnance no. 83.127 du 5 juin 1983 portant reorganisation foncière et domaniale</i></p> <p><i>Article premier: La terre appartient la nation et tout mauritanien, sans discrimination d'aucune sorte, peut, en se conformant à la loi, en devenir propriétaire, pour partie.</i></p> <p><i>Article 2: L'Etat reconnait et garantit la propriété fonciere privée qui doit, conformément à la Chariaa, contribuer au développement économique et sociale du pays.</i></p> <p><i>Article 3: Le système de la tenure traditionnelle du sol est aboli.</i></p>	<p><i>Ordinance 83.127 of 5 June 1983 concerning land reform and the organization of Domain lands.</i></p> <p><i>First article: Land belongs to the nation and every Mauritanian, without discrimination of any kind, can, in conformity with the law, own land.</i></p> <p><i>Art. 2: The state recognizes and guarantees private property which must, in conformity with the shari'a, contribute to the economic and social development of the country.</i></p> <p><i>Art. 3: The traditional land tenure system is abolished.</i></p>

Article 5: Les immatriculations foncières prises au nom des chefs et notables sont réputées avoir été consenties à la collectivité traditionnelle de rattachement.

Article 6: Les droits collectifs légitimement acquis sous le régime antérieur préalablement cantonnés aux terres de culture, bénéficient à tous ceux qui ont, soit participé à la mise en valeur initiale, soit contribué à la pérennité de l'exploitation.

L'individualisation est de droit. A défaut d'accord pour le partage, et si l'ordre social l'exige, les opérations de redistribution seront réalisées par l'Administration.

Article 7: Les actions foncières collectives sont irrecevables en justice. Les affaires de même nature actuellement pendantes devant les cours et tribunaux seront radiées des rôles sur décision spéciale de la juridiction saisie. Les arrêts ou jugements de radiation sont inattaquables.

Article 9: Les terres "mortes" sont la propriété de l'Etat. Sont réputés mortes les terres qui n'ont jamais été mises en valeur ou dont la mise en valeur n'a plus laissé de traces évidentes.

L'extinction du droit de propriété par "l'indivisibilité" est opposable aussi bien au propriétaire initial qu'à ses ayants droits, mais ne s'applique pas cependant aux immeubles immatriculés.

Décret no. 84.009 portant application de l'Ordonnance no. 83.127 du 5 juin 1983 portant reorganisation foncière et domaniale

Article 2: Pour être juridiquement protégée, la mise en valeur d'une terre doit consister en constructions, plantations, cultures, ou digues de retenue d'eau.

Art. 5: Land registrations made in the name of chiefs and notables are understood to have been granted to their traditional associated collectivities.

Art. 6: The collective rights legitimately acquired under the former regime, initially confined to agricultural lands, benefit all those who have either participated in their initial development or contributed to their continued exploitation.

Individual ownership is normal. When there are no arrangements for division, and when the social order requires it, redistribution will be arranged by the administration.

Art. 7: Collective lawsuits concerning property are legally inadmissible. Such lawsuits now pending before the courts and tribunals will be struck off the rolls by special decisions of the jurisdiction concerned. The decisions or judgments to strike such lawsuits off the rolls are not appealable.

Art. 9: Dead lands [terres mortes] are the property of the state. Lands which have never been developed or whose development has left no trace are considered dead.

Extinction of property rights by "indivisibility" [the passage of time] can be opposed by the original proprietor and by his heirs, but not in the case of properties which have [since] been [officially] registered (by someone else)

Decree 84.009 providing the implementation of Ordinance 83.127 of 5 July 1983 concerning land tenure reform and organization of Domain lands.

Art. 2: To be legally protected, the development of a plot must include constructions, crops, or dikes for retaining water.

<p><i>Cette mise en valeur doit être conforme à l'Ordonnance 83.127 du 5 juin 1983, et au présent décret.</i></p> <p><i>Article 13: A défaut d'accord amiable, si l'ordre social l'exige, et si la redistribution ne compromet pas la rentabilité des terres, les opérations de partage sont réalisées en présence des membres de la collectivité concernée, par une commission présidée par le préfet et comprenant: un Magistrat du Tribunal départemental, le Commandant de la Brigade de gendarmerie, le Chef du Service agricole régional, un Représentant des Structures d'éducation des masses.</i></p> <p><i>Article 21: Toute collectivité qui exprime le désir de conserver ses terres indivises, doit se transformer en coopérative régulièrement constitué dont les membres sont égaux en droit et en devoir.</i></p> <p><i>Il en est de même pour les collectivités dont les terres ne peuvent être individualisées pour des causes d'ordre économique ou technique constatées par la Commission prévue à l'Article 13 du présent décret.</i></p>	<p><i>This development must be in conformity with Ordinance 83.127 of 5 June 1983 and the present decree.</i></p> <p><i>Art. 13: When amicable division cannot be arranged, if the social order requires it, and if the redistribution does not compromise the profitability of the plots, the division will be arranged in the presence of members of the collectivity concerned by a commission presided over by the prefect and including a magistrate of the tribunal of the department, the commandant of the local militia [Brigade de Gendarmerie], the head of the regional agricultural service, a representative of the Extension Service.</i></p> <p><i>Art. 21: Any collectivity that wishes to retain lands undivided must transform itself into a regularly constituted cooperative in which the members have equal rights and duties.</i></p> <p><i>The same is true for collectivities whose lands cannot be divided among individuals for economic or technical reasons noted by the Commission referred to in Art. 13 of the present decree.</i></p>
<p><i>Circulaire 00013</i></p> <p><i>S'agissant des périmètres irrigués, et des concessions rurales devant faire l'objet d'investissements <u>importants</u> [author emphasis], vous vous conformerez, aux dispositions de la réglementation foncière et domaniale afin de ne pas gêner les plans d'aménagement dont la réalisation est envisagée sur la vallée du fleuve.</i></p>	<p><i>Circulaire 00013 reads:</i></p> <p><i>Concerning the irrigated perimeters and the rural concessions that will be the object of major investments, you will follow the dispositions of the legislation on tenure and domain lands in order to avoid interfering with the development plans whose implementation is envisaged for the river valley.</i></p>

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