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*(Dominican Republic and Haiti)*
Case Study Report

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1. INTRODUCTION

Hispaniola Island is shared by Haiti and the Dominican Republic. The level of environmental protection/degradation varies dramatically between the two parts, with the Haitian section, suffering severe deforestation and soil degradation, while the Dominican side has been able to restore substantial parts of formerly lost forests. Also regarding migration processes, the two nations on the island show quite different trends and patterns, with Haiti as an emigration country and the Dominican Republic characterized by a mixture of emigration, immigration and transit migration. This Case Study Report, based on field research on Hispaniola Island as well as on a review of secondary sources, analyzes the linkages between environmental change and migration processes in selected regions in both parts of the island.

Starting with a summary of the available research on environmental migration in Haiti and the Dominican Republic, this report then provides an overview on environmental problems, as well as on migration trends and patterns. The main section focuses on the findings of the field research and on the linkages between environmental degradation and migration. The central hypothesis of this contribution is that environmental degradation is a factor that intensifies internal and international migration. Furthermore it is assumed that policy plays a crucial role in controlling, slowing or even reversing processes of degradation and therefore also in reducing the pressure for migration as an adaptation strategy.

Research on environmentally induced migration is a relatively new field. Nevertheless, the Haitian case has been cited by several authors when talking about the impacts of environmental degradation on migration. According to Jacobson (1988), first references to Haitian boat people as “environmental refugees” were made as early as in 1984. While Jacobson argues that their migration is substantially environmentally induced, Barker criticizes the use of the term “environmental refugees” as imprecise and refers to the set of other factors that push Haitians from their country. Both authors agree that natural disasters in Haiti are aggravated by human activities, reducing “the capacity of ecosystems to regenerate themselves” (Barker
1989) or leading to “unnatural disasters” (Jacobson 1988). Myers used a drastic expression by emphasizing that Haitians are “abandoning their homelands in part because their country has become an environmental basket case” (Myers 1991: 189). According to Myers, Haitians not only fled political oppression, but also were “driven by the grand-scale rundown of the environmental resources - soil, water and trees - that underpin their agricultural economy” (Myers 2001: 2), concluding that environmental drivers are the predominant factor for Haitian migration. In a study for the Natural Heritage Institute, Leighton-Schwartz and Nortini are more sceptical, arguing that environmental factors play only a minor role in the predominantly political and economic migration (Leighton Schwartz & Notini 1995: 88). Catanese underlines that Haitian migration is triggered by both environmental and political factors that have “reinforced each other over long periods of Haitian history” (Catanese 1999: 51). He also reminds readers that the destabilization of the Haitian economy is aggravated by deforestation and soil erosion. In a three-stage demography-driven development model, Preeg analyzes the impact of environmental degradation on migration and vice versa, identifying rural population pressure on arable land in the first stage, leading to rural-urban migration in the second stage and to increasing pressure for international migration in the third and last stage (Preeg 1996: 8). In a study on environmental scarcity and conflict, Howard underlines that according to the Haitian government, the degradation of agricultural lands is the main driving factor for rural-urban migration in Haiti. According to Howard, the migration from degraded lands to environmentally fragile areas in urban centers can be characterized as “ecological marginalization”, as those who migrate are suffering an unequal distribution of resources (Howard 1998: 15). According to Johnson, recent migration flows are not political but environmental refugees, pushed by environmental degradation (Johnson 2007: 3). In his paper, he lists processes of slow-onset degradation as well as several natural disasters that have hit Haiti, linking them to internal displacement and international migration. In their analysis of the historical context of Haitian migration to the Dominican Republic, Silié has a more balanced look at the root causes, mentioning environmental degradation as one among several factors that contribute to emigration from Haiti (Silé 1998: 21).

In the literature on migration from or within the Dominican Republic, the term “environmental refugees” or “environmental migrants” is mentioned to a much lower extent. Nevertheless, some studies deliver indicators for the existence of such migration flows. In an overview paper on linkages between rural populations, migration and the environment, Bilsborrow refers to a case study on the effects of cumulative processes of environmental degradation on internal migration, carried out by Zweifler, Gold & Thomas (1994). They analyzed processes influencing land-use change by linking survey data to a time series of air photographs, showing that the decline in soil fertility in the second half of the 20th century has led to migration and to changes of crops. In a study on Haitian migration throughout the Caribbean, Fergusson also mentions the accusations of Dominican authorities regarding Haitian

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1 Howard refers to a paper from the Haitian government, see Howard 1998: 6; Endnote 3
immigrants, who are blamed for deforestation in the D.R. through cutting down trees for charcoal (Ferguson 2003: 20).

1.1. Synthesis of context

Hispaniola Island (also called Quisqueya), the second-largest (76,000 sq km, DR: 48,400 HI: 26,600 sq km) and most populated (18.4 m., DR: 9.5 m., HI 8.9 m.) island in the Caribbean Sea, is shared by two independent states: French- and Creole-speaking Haiti in the west and the Spanish-speaking Dominican Republic in the east. Demographic indicators reveal some striking differences between the two countries: While the total fertility rate is 2.78 children born per woman in the DR, it is 4.79 children per woman in Haiti. At the same time, the infant mortality rate is much higher in Haiti (62.3 deaths per 1,000 live births) than in the Dominican Republic (26.9 deaths per 1,000 live births). Life expectancy at birth is only 57.6 years in Haiti, while it is 73.4 years in the Dominican Republic. The population of both countries is relatively young, with a median age of 24.7 years in the DR and 18.5 years in Haiti. Regarding education, only 52.9% of Haitians over age 15 can read and write, while 87% of the Dominicans possess these basic educational skills.

Haiti, the poorest country of the western hemisphere (HDI of 0.475, rank 154) is on one side of the island, a lower middle-income country (HDI 0.749) which is well-known as a tourist paradise with all-inclusive resorts and white sandy beaches on the other. The huge differences in economic development are also reflected in the Gross Domestic Product. Total GDP (PPP) in the Dominican Republic was 61.7 billion USD in 2007, compared to only 11.4 billion USD in Haiti. GDP per capita in the D.R. is 8,400 USD in 2007, compared to only 1,800 USD in Haiti, which is again the lowest in the Western Hemisphere and comparable to countries of Sub-Saharan Africa. Even though the Dominican Republic is considered to be a lower middle-income country, it suffers from an extreme income inequality. While the poorest half of the Dominican population receives less than 20% of the national income, the richest 10% gets nearly 40%. After an economic downturn in 2004/05, the annual growth rate of GDP has been around 10% in 2006 and 2007 in case of the D.R., while the growth rate in Haiti has been only around 2% after stagnation in 2004 and recession in 2005. In Haiti, two thirds of the workforce work in the primary sector, while in the D.R. 58% work in the tertiary sector, with an important share of tourism (14% of total workforce).

<table>
<thead>
<tr>
<th>Tab. 1: GDP and workforce by sectors, D.R. and Haiti</th>
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</thead>
<tbody>
<tr>
<td><strong>Dominican Republic</strong></td>
</tr>
<tr>
<td>Agriculture</td>
</tr>
<tr>
<td>Industry</td>
</tr>
<tr>
<td>Services</td>
</tr>
</tbody>
</table>

*Source: CIA World Fact Book 2008*
According to the NGO Social Watch, 78% of the Haitian population is living on less than 2 US$ per day (16% in the D.R.), and nearly half of the population (47%) is suffering undernourishment (27% in the D.R.) (Social Watch 2008).

Concerning the political system, both countries on the island are presidential republics with a power division of executive, legislative and judicial branches. The president is elected by popular vote and head of the state in Haiti, and by head of state and of government in the Dominican Republic. Both countries have two-chamber parliaments and in both cases, the national government (Haiti) or the president (D.R.) appoints the heads of the sub-national administrations (32 provinces in the D.R., 10 departments in Haiti). Corruption is a widespread problem in Haiti (rank 177 of 180) as well as in the Dominican Republic (rank 102), according to the Corruptions Perceptions Index by Transparency International (2008).

In order to understand the present day state of the island, a short overview of the historical context is given here. In 1492 Christopher Columbus landed on the island and it became the first permanent settlement of Spain in the New World. A plantation economy was installed and African slaves replaced the native population, diminished by diseases and massacres. In 1697, the western part of the island was ceded to France and a century later the whole island became a French territory in the Treaty of Basel. The following decades were characterized by struggles for independence, which the western part (Haiti) obtained in 1804, declaring the abolition of slavery as the first country worldwide. The eastern two-thirds of the island finally gained independence in 1863, after Haitian rule (1821-1844), political turmoil and a short-term voluntary colonial status (1861-1863). During the early 20th century, both parts of the island experienced occupation by US troops, followed by brutal dictatorial regimes: General Trujillo ruled the D.R. from 1930 to 1961, while the Duvaliers (“Papa Doc” and “Baby Doc”) installed a terror regime with the infamous death squads of the Tonton Macoute from 1957 to 1986.

Haiti has yet to achieve peace. The last 20 years have been characterized by violent conflicts, as the coup d’état against Aristide in the early 1990s (with more than 10,000 people killed) and the hunger revolts in 2008 leading to the dismissal of prime minister Alexis. President René Préval (FL2) is in office since 2006 (served already a first term from 1996 to 2001). In the Dominican Republic, the political systems seems to be more stable now, as after the presidency of Balaguer (1986 to 1996), maintained by electoral fraud, two predominant parties have been alternating power (PLD3 and PRD4). On May 16th 2008, president Leonel Fernández (PLD) was elected to his second consecutive term (third term in total) with 53% of the popular vote.

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2 FL = Fanmi Lavalas (Lavalas Family), populist leftist political party based on the Lavalas Movement, founded in 1996 by Jean-Bertrand Aristide and his supporters.
3 PLD = Partido de la Liberación Dominicana (Dominican Liberation Party), center-right political party, founded in 1973 by Juan Bosch.
4 PRD = Partido Revolucionario Dominicano (Dominican Revolutionary Party), socialdemocrat political party, founded in 1939 by Dominican exiles during the Trujillo dictatorship.
1.2. Brief overview of environmental problems

Both countries share the same ecosystem and therefore face similar, if not the same, environmental challenges. The island is located on the path of tropical storms and is therefore exposed to heavy rainfalls and flooding during the hurricane season. This became obvious once again during the hurricane season of 2008, when tropical storm Fay and hurricanes Gustav, Hanna and Ike produced massive rainfalls and flooding. Forest resources on both sides of the island have suffered large-scale deforestation and soil erosion, even though to very different degrees, which is obvious when looking at satellite pictures of the island, showing a clear division line between the degraded lands on the Haitian side and green forests on the Dominican side (Wilson 2005: 19, 28; NASA 2002):

![Satellite picture of Haiti and the D.R.](source: NASA 2002)

The history of colonialization, repressive regimes and longstanding political turmoil in both countries are major contributors to the current problems of environmental degradation. The major problems on the island are deforestation, soil erosion and insufficient supplies of potable water. According to the 2005 Environmental Sustainability Index, Haiti ranks at 141 out of 146 countries, while the Dominican Republic ranks at 119, which is the third lowest rate in the Americas after Haiti and Trinidad & Tobago. This is a clear indicator that both parts of the island are heavily affected by environmental problems.

Deforestation in Haiti started as early as the 17th and 18th century, when first the Spanish and then the French colonial power cleared forests for the plantation economy and wood production. After gaining independence, the situation became even worse: in 1825, the political elite of Haiti agreed with the former colonial power to pay for independence, with the promise of being recognized as member of the international community. The reparation payments were estimated to be around 21 billion US$ at current rates and were finally paid off as late as 1947 (Johnson 2007: 4). In order to repay the debt, the Haitians cut down forests and sold the tropical wood for furniture.
production. But deforestation continued even after having repaid the debt, logging trees for charcoal production and land clearing. In 1950, about 25% of Haiti was still covered with forests. In the late 1980s, the forest cover decreased to 10% and reached only 4% in 1994. Nowadays, only about 1.4% of Haiti remains forested (Jamaican Observer 23.9.2004).

In the case of the D.R., the expansion of agricultural plantations as well as the use of charcoal as an energy source has reduced the forest cover from about 75% in 1922 (Yunén 1998: 157) to 12% in the early 1980s, again reaching about 28% nowadays. The increase of the forest cover in the D.R. since the 1980s is due to large-scale programs of reforestation (Plan Quisqueya Verde) and to the promotion of other sources of energy than charcoal⁵ (Diamond 2005: 341).

In his book on the collapse of civilizations, Jared Diamond contrasts the environmental problems that Haiti is facing with those of its neighbour state in the east. According to Diamond, environmental limitations explain a part of Haiti’s poverty: “a higher percentage of Haiti’s area is mountainous, the area of flat land good for intensive agriculture is much smaller, there is more limestone terrain, and the soils are thinner and less fertile and have a lower capacity for recovery.” (Diamond 2005: 339).

As a consequence of the large-scale deforestation, soil erosion has also become a major problem in Haiti. According to estimates by the United Nations, about 50% of the nation’s topsoil has been washed away into the ocean; the affected lands have become unreclaimable for farming purposes (Homer-Dixon 1994, ISRIC 2008). Soil erosion provokes a chain of subsequent environmental problems, such as the decrease of farmable land, decrease of the infiltration rate of water in underground layers, plain sedimentation, obstruction of drainage systems, and erosion of soil into the sea (Léger 1998: 204).

The disappearance of Haiti’s forests also led to changes in rainfall patterns with a higher probability of droughts. During heavy rainfalls, especially during the hurricane season, the absence of natural barriers like forests results in mudslides, which on several occasions has buried entire villages. The higher vulnerability of Haiti becomes obvious when comparing the impact of tropical storms and other extreme weather events in Haiti and the Dominican Republic. A cross-border example for the impacts of extreme weather events occurred in late May 2004. After heavy rainfalls of up to 500 mm, a flash-flood and landslides washed away parts of the towns of Jimani (D.R.), Mapou and Fond Verettes (Haiti). In the D.R. nearly 700 people were killed, in Haiti the death toll was more than 2,600 people. A total of 41,300 people were affected by the flood (EM-DAT 2008). A main factor for the intensity of destruction was the large-scale deforestation within the drainage basins and the presence of human settlements within the floodplains of rivers and in other low-lying areas on the south flank of the Massif de la Salle. Just a few months later, in September 2004, hurricane Jeanne passed over Hispaniola Island, resulting

⁵ Interview with José Contreras, INTEC, Santo Domingo, 17.3.2008
in more than 3,000 deaths in Haiti, while the D.R. lost 19 citizens, most of them drowned in swollen rivers.

Table 2 shows the number of killed, affected people and total damage resulting from natural disasters on Hispaniola Island. Looking at the figures, it becomes obvious that the Haitian part of the island tends to have higher numbers of killed or affected people but lower numbers of total damage compared to the Dominican Republic. Due to the large-scale deforestation and soil erosion, floods as well as droughts are more frequent in Haiti and have a higher impact than in its neighbor state.

**Tab. 2: Summary of Top 5 Natural Disasters on Hispaniola Island (1900-2008)**

<table>
<thead>
<tr>
<th>Type of Event</th>
<th># of Events</th>
<th>Killed</th>
<th>Total Affected</th>
<th>Damage in 1,000 US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storm</td>
<td>20</td>
<td>4,462</td>
<td>2,748,059</td>
<td>2,767,910</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>13,927</td>
<td>2,926,423</td>
<td>2,926,423</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>2,748</td>
<td>1,467,040</td>
<td>1,467,040</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>13,927</td>
<td>2,926,423</td>
<td>2,926,423</td>
</tr>
<tr>
<td>Flood</td>
<td>17</td>
<td>844</td>
<td>2,195,998</td>
<td>45,220</td>
</tr>
<tr>
<td></td>
<td>41</td>
<td>4,995</td>
<td></td>
<td>45,220</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>2,196</td>
<td></td>
<td>45,220</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>4,995</td>
<td></td>
<td>45,220</td>
</tr>
<tr>
<td>Drought</td>
<td>1</td>
<td>-</td>
<td>240,000</td>
<td>5,000</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>-</td>
<td></td>
<td>5,000</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>-</td>
<td></td>
<td>1,000</td>
</tr>
<tr>
<td>Earthquake</td>
<td>2</td>
<td>76</td>
<td>2,015</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>6</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>262</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>Landslide</td>
<td>-</td>
<td>262</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

Source: EM-DAT: The OFDA/CRED International Disaster Database – www.emdat.be, Université Catholique de Louvain, Brussels (Belgium), accessed on 22.7.2008; the impact of the tropical storms and hurricanes in 2008 are not yet included in the table; according to the EM-DAT definition, only disasters with at least one of the following criteria are included in the dataset: a) 10 or more people reported killed, b) hundred or more people reported affected, c) declaration of a state of emergency, d) call for international assistance.

The impacts of floods are not only aggravated by deforestation (missing natural obstacles for massive flows of water), but also by the extraction of aggregates from the river banks. These aggregates like stones and limestone are mainly used for construction. According to José Contreras from the Instituto Tecnológico de Santo Domingo (INTEC), the number of natural rivers in the D.R. has decreased by 70% due to the extraction of aggregates. Former rivers became small rivulets or just disappeared. In the case of heavy rainfalls, the water masses tend to extend in a horizontal manner because former riverbeds disappeared.\(^6\)

Even though it might seem paradoxical at first sight, water shortages are another environmental problem in both parts of the island. The uncontrolled development, above all of urban areas and - in the case of the D.R. - tourist destinations, led to serious problems in water supply, which are aggravated during the dry season. In some areas of the D.R., desalinization plants have been installed as the natural water table is not naturally replenished or has even filled up with salt water. Industrial contamination is another factor worsening the water quality. The D.R. experienced an uncontrolled growth of industry in the last four decades, without any design for cleaner production or contamination control.

\(^6\) Interview with Dr. José Contreras, INTEC, Santo Domingo, 17.3.2008
Finally, the coastline is threatened by erosion of beaches on the one hand, and by the inflow of eroding soil into the sea on the other, damaging the coral reefs. These are serious challenges for the future, taking into account the importance of tourism as one of the most important income sources of the Dominican economy.

1.3. Brief overview of migration processes

While Haiti is mainly an emigration country, the Dominican Republic also is an immigration country as well as a hub for transit migration, above all to the US territory of Puerto Rico. Along with international migration, internal migration also plays an important role in both countries. This section gives a short overview of main migration trends and patterns in both parts of the island – and between them.

1.3.1. Intra- insular migration

Since the early 20th century, the Haitian labor force was used in the Dominican Republic, mainly in the harvest of sugarcane fields. But despite the long tradition of migration, Haitians in the D.R. have been and still are confronted with prejudices and sometimes even violence. A violent incident which is still putting a strain on Dominican-Haitian relations was the *Perejil-massacre*\(^7\) in 1937, when an estimated 17,000 to 35,000 Haitians were literally slaughtered in the border area by Dominican soldiers and police forces. They followed an order by dictator Trujillo, who warned of a peaceful invasion by Haitian immigrants, trying to regain control of the whole island. The construction of an invasion scenario as a constant threat of Haitian immigrants is a widely used pattern in Dominican politics, mainly used to distract from internal problems and to strengthen national identity. At the same time widespread anti-Haitianism, rooted in the Haitian occupation in the first half of the 19th century, together with restrictive migration policies and deportation campaigns serve to maintain low wages for Haitian labor migrants. The total number of Haitians living temporarily or permanently in the Dominican Republic is usually exaggerated for ideological reasons, with figures ranging from 1 to 2 million Haitians. Migration researchers however estimate a lower number of 250,000 to 500,000 (Silié 1998: 12 f). Evidence presented to the United Nations Working Group on Slavery and reports from several human rights organizations reveal that the wages were miserably low and that working and living conditions failed to meet standards set by the two governments (Anti-Slavery 1998; HRW 2002; Wooding & Mosley-Williams 2004). The UN Population Division estimates about 156,000 immigrants in the Dominican Republic and 30,000 in Haiti, representing 1.8% and 0.4% respectively of the total population. The migration rate is negative in both countries, with an annual average of 28,000 and 21,000 people respectively leaving the country per year between 2000 and 2005 (UN Population Division 2006).

\(^7\) Dark-skinned persons were forced to pronounce the Spanish word “perejil” (parsley). Those who failed to pronounce the Spanish “R”, were suspected to be Haitian immigrants and killed with machetes.
1.3.2. Haitian migration

In Haitian migration history, mainly political and economic factors – the latter also interlinked with environmental degradation – have been and still are the main “push”-factors for internal as well as international migration. The first mass migration in Haiti (urban > rural) took place shortly after independence, in the context of postcolonial land reform and decentralization of power from the urban centers to the rural areas (Catanese 1999: 19). From the late 19th century to the 1930s, another migration wave occurred, this time with poor rural Haitians emigrating to Cuba and the Dominican Republic for labor on sugarcane plantations. International migration flows towards the United States started in the 1950s, with mainly well-educated Haitians seeking a better standard of living abroad. This “brain drain” grew during the dictatorial regime of the Duvaliers (1957-86). From the 1960s to 1980s also semi-skilled Haitians from the middle and lower urban classes joined this flow. In the 1960s, emigration was even aggravated by an economic crisis and the impacts of Hurricane Flora, causing about 5,000 fatalities in October 1963 (Dunn 1964: 134).

Since the early 1970s, those who could not afford a visa or plane ticket tried to reach the shores of Southern Florida by boat. These “boat people” came rather from towns and villages from all over the country than from Port-au-Prince. Growing poverty and repression by the Tonton Macoutes increased this exodus by boat. This flow stopped for a short time in 1990 with the election of Aristide as president, raising the hope for a peaceful development. But under the military rule from 1991 to 1994, again thousands of Haitians left their country, mostly by boat. Poverty and desperation has fuelled the exodus from Haiti. In 2003, the US Coast Guard picked up 2,000 Haitian boat people trying to reach US Shores, more than from any other Caribbean nation. Unlike Cuban nationals, Haitian migrants are usually immediately deported if they come to the attention of the US immigration authorities – but many still try, often moving first to other islands like the Bahamas. Nowadays, millions of Haitians live abroad and have built up dense networks between regions of origin and destination, above all in the United States, Canada (mainly Québec), the Dominican Republic and France; but also in the Bahamas, Cuba and the Lesser Antilles. Sizable Haitian communities in the US are found in Miami (“Little Haiti”) and in New York City (neighbourhoods in Brooklyn and Queens).

The consequences of migration for development in Haiti are twofold: in many cases migration has been undertaken by male heads of household in order to provide remittances to remaining family members. These contribute to the household income, but in order to secure basic human needs, the maintenance of agricultural activities may still be required. Therefore, either the remaining family members (wife, children) have to do the agricultural labour. The necessity to contribute to the household income is a main reason for high dropout-rates of students between primary and secondary school.

1.3.3. Dominican migration
In the Dominican Republic, international migration is often linked to internal migration. The typical pattern starts with rural-urban migration, mainly to the two urban centres: Santo Domingo and Santiago, but also to provincial capitals and areas of international tourism, such as Puerto Plata or La Romana. A principal root cause for rural-urban migration is the crisis in agriculture, marked by decreasing prices, the neglect of the countryside by the government and in some regions also by problems of environmental degradation. The urban centres are used as a stepping-stone for international migration. Here, the migrants are able to arrange contacts and gain some income for the passage (and eventually for the visa). Another pattern is undocumented migration by Dominicans and citizens of other countries (DR as transit country) by boat to the U.S. American territory of Puerto Rico, which serves as a hub for further migration to the United States.

International migration from the Dominicans to the United States (but also to other destinations, such as Spain) began in the early 1960s after the assassination of dictator Trujillo. High unemployment and political repression led to further emigration from 1966 to 1978. This group of emigrants helped to establish a network for the subsequent arrivals. A third wave of emigration started in the early 1980s, in the face of economic recession. Along with the United States and Canada, Spain and Italy (to a lesser extent also other European countries) have also become important destinations for Dominican migrants, as the following Graph 1 shows. Dominican migration to Spain presents some particular characteristics, such as the predominance of female migrants and the strong labour linkage to the domestic service (Romero 2007).

Pictures 2a & 2b: Queue at the Spanish Consulate in Santo Domingo
According to data of the Spanish local registry (padrón municipal), around 77,000 Dominican citizens were living in Spain in 2007, compared to 25,000 in the year 2000, mainly living in the urban areas of Madrid (40%) and Barcelona (22%) (INEbase 2008). The number of those who were born in the D.R. (red column, Graph 1) also includes those Dominicans who already obtained Spanish citizenship. It is important to mention that the statistics of the local registries in Spain include both, legal and undocumented migrants, as the inscription in the local registry is a precondition for obtaining access to certain social services, such as education and health. Data from the Spanish embassy in Santo Domingo also show a clear tendency of an increase of migration to Spain: while the consular section expedited around 16,500 visas for Dominican citizens in 2004, this number grew to around 20,000 in 2005 and 2006 and reached a new peak of 24,356 expedited visas in 2007. The author of this report witnessed large queues of Dominican citizens waiting at the entrance of the Spanish Consulate in Santo Domingo (see Pictures 2a and 2b). Parallel to the growth of emigration, also the amount of remittances has increased in both countries, Haiti and the D.R. (see Graph 2).

Graph 1: Dominicans in Spain, 1996 to 2008

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8 Interview with Manuel Hernández Ruigómez, General Consul of Spain, Santo Domingo, 6.3.2008
According to both migration researchers and the Spanish Consulate in Santo Domingo, Dominican emigration towards Spain originates mainly in the Southwest of the Dominican Republic (municipalities of Vicente Noble, Tamayo, Neyba, Postre Río, La Descubierta, Jimaní and others). In the United States, the Dominican migrant community is concentrated above all in New York and surroundings (state of New Jersey), but also in Florida (Miami/Broward County) (US Census Bureau 2000).

2. METHODS

2.1. Justification of the selection

The selection of regions was mainly based on expert interviews. Several experts in Santo Domingo referred to the Dominican-Haitian border region as a case that could be of interest for the EACH-FOR research project. This reference was based mainly on two circumstances: on the one hand, the
Dominican Southwest is one of the regions most heavily affected by deforestation and soil erosion on the Dominican side of the border (INDESUR et al. 1994), on the other it is a major region of emigration (mainly to Santo Domingo and Spain) as well as of immigration (Haitian workers). Therefore, the border region in the provinces of Independencia and Bahoruco, and more specifically communities in the municipalities of Jimaní, La Descubierta and Neiba were selected for field research on the Dominican side. In addition to being a region affected by environmental degradation and a region of origin and destination for migrants, the Dominican Southwest is also the poorest region within the Dominican Republic. The regional economy is mainly based on agriculture and on Dominican-Haitian cross-border commerce. The villages in the mountain regions are only accessible by motorcycle or high-clearance vehicles, as the roads are unpaved.

On the Haitian side of the border, fieldwork has been carried out by a local subcontractor mainly in the surroundings of Port-au-Prince as a destination and “transit hub” for migrants from the interior of the country. While in the Dominican Republic, a total of 15 expert interviews have been conducted, no such interviews have been made in Haiti for security purposes. According to the warnings of UNDP, MINUSTAH and the German Consulate, the kidnapping of foreigners had increased at that time of the fieldwork, thus preventing the free movement of the author for the purposes of conducting interviews. Notably, just a month after the fieldwork stay, a hunger rebellion broke out in Haiti.

Picture 3: Map of Hispaniola Island

Source of physical map: Wikimedia [http://commons.wikimedia.org/wiki/Image:Hispaniola.jpg]; region of fieldwork marked with red ellipse; Province of Independencia marked red in small map, Province of Bahoruco marked blue

2.2. Discussion of methods

9 Interview with Martin Schneichel, GTZ Santo Domingo, 3.3.2008
The field research on Hispaniola Island (February & March 2008) was mainly based on expert interviews as well as interviews with inhabitants of affected areas. In the case of expert interviews, the snowball-method proved to be a very helpful tool as it opened the chance to contact and meet other experts involved in the fields of interest. The capital of the Dominican Republic, Santo Domingo, served as a hub of information and contacts for the subsequent trip to the border region. In addition to the qualitative interviews, a total of 60 questionnaires have been applied (30 in different communities of La Descubierta, D.R., 15 non-migrants and 15 migrants and 35 in communities around Port-au-Prince, Haiti, 18 non-migrants and 17 migrants). In both regions, the application of questionnaires was subcontracted to local researchers.

While the interviewers received instructions on how to carry out the application of questionnaires, several problems arose during the application in the field. The Spanish version of the non-migrant questionnaire was based on an older version, which led to some gaps in the filling-out of the questionnaires. In the Haitian case, many questions were skipped by the local subcontractor. In general, the relatively low number of questionnaires does not permit drawing representative conclusions, but rather indicate some tendencies in selected communities.\textsuperscript{10}

3. FIELDWORK FINDINGS & ANALYSIS

In addition to the motorcycle ride\textsuperscript{11} to remote border villages in the municipalities of La Descubierta and Neiba, the flight from Santo Domingo to Port-au-Prince provided a major impression from the fieldwork on Hispaniola Island. From the bird’s eye perspective, the borderline between the Dominican Republic and Haiti is clearly marked: while the Dominican side is covered with forests (even though some deforested areas are observable also), the Haitian side appears in grey and brown tones, a clear sign for the extreme grade of land degradation. The following section focuses on the empirical basis for the linkage between environmental degradation and migration processes.

3.1. Fieldwork results: Haiti

In Haiti, the extension of the environmental disaster is also reflected in the qualitative interviews with people living in affected areas (total of 10). All interviewees stated that they are confronting environmental problems, such as dry and unfertile soils as well as the risk of floods during the rainfall season.

\textsuperscript{10} Concerning data transfer to the electronic data entry system “suverymonkey,” there were some critical challenges which revealed weaknesses in the system. An important point concerns the table on household members (Q31 Migrant Questionnaire, Q34 Non-Migrant Questionnaire, version 4.1.08), where several relevant categories are not mentioned in the pull-down menus. Central categories as “housewives” or “migrants” are not available – which means that specific information gathered during the application of the questionnaires can not be transferred to the online database.

\textsuperscript{11} I would like to thank the GTZ office in La Descubierta for providing a motorcycle and Yuner Cuevas for driving the long and rough way up to the mountain villages.
Typical statements were “we cannot produce here because the soil is just sand”, “the water comes into our house when the rain is falling” or even “when the last cyclone passed, more than 24 houses of our neighborhood disappeared”. These three phrases reflect the main environmental problems of Haiti: unfertile lands as a result of deforestation and soil erosion, floods during the rainfall season and the high vulnerability during the passage of hurricanes and other tropical storms. Nevertheless, only four out of the ten interviewed persons are actually planning to migrate or see migration as an option for an improvement of their livelihood. The remaining six respondents do not see migration as a viable option. Family ties and “faith in god” are mentioned as reasons to stay in the place of residence despite the problems the respondents are facing. Regarding the “tipping point”, i.e. the moment when environmental problems would influence a decision to migrate, seven out of ten respondents mentioned a strong cyclone that would destroy their home as the moment to leave. The remaining three respondents argued that they would not leave their village as they do not see any other option. Only two interviewees mentioned that they have relatives in the United States who are sending smaller amounts of money on a regular basis. Concluding the statements collected by the qualitative interviews, a linkage between environmental change, mainly sudden natural hazards, and migration seems to be apparent.

In the questionnaires, however, environmental problems were not identified as major root causes for migration. In the group of migrants, only 4 out of 15 (2 skipped questions) stated that such problems affected their decision to move. On the other hand, 11 out of 15 respondents expect that environmental problems will be a reason to migrate in the future, even though all 15 interviewees are not planning to move away. Economic problems were seen as main reason for migration (not satisfied with livelihood, not enough income, unemployment). 11 out of 15 mentioned that they have family members who migrated, seven of them to the United States. Those migrants who were working in agriculture (4 out of 17) stated that above all the high price of water and fertilizers, but also poor soil quality, were the main reason for declining yields. In the group of non-migrants, i.e. those persons living in areas affected by environmental change, the majority (12 out of 16; 2 skipped) interestingly see an improvement of the environmental situation in their area of residence. Migration from their village is perceived mainly as temporary migration. As in the group of migrants, also non-migrants see economic problems as the main reason for emigration, mainly because of unemployment, low income or missing availability of land for farming.

The fact that the questionnaires do not reflect environmental problems as a main cause for migration may be explained by the circumstance that economic problems are seen as the primary problem, even though in many cases – above all among the rural population – the environment is the basis of a functioning economy. As elaborated in the section on environmental problems, 50% of Haiti’s topsoil has been washed into the ocean. This means that vast areas of the country are not arable anymore, resulting in an increasing rural unemployment as well as internal and/or international migration. It seems to be a common pattern that those affected by
environmental change, above all by slow-onset degradation, do not perceive this as a problem, but tend to see the economic consequences of this degradation as principal problem. Nevertheless, it is important to mention again that the Haitian case-study was very limited; therefore it is a difficult, if not impossible, to draw general conclusions.

Even though no expert interviews have been realized in Haiti, an interview with Juan Artola at the IOM mission in Mexico City has been conducted. Juan Artola has been the chief of mission in Port-au-Prince (1998-2001) as well as in Santo Domingo (2001-2004). The following citation also reflects the interrelationship between economy, environment and migration:

“The Haitian economy does not exist, it is not that it has never existed, but it is a subsistence economy, so there is no integrated agricultural market in Haiti. The degradation [of soils] is a process that has taken place over sixty or seventy years, and the soil is getting worse and worse, less arable. The issue of firewood, the issue of charcoal is a historic one in Haiti, and this makes things move... with all this, Haitian migration still maintains a circular character, this means that Haitians are going to the Dominican Republic and many of them are returning to Haiti, so they come and go, but obviously the Haitian countryside is not offering anything. Many areas are already in process of desertification.”

(Juan Artola, former Chief of Mission in Haiti and Dominican Republic, Mexico City, 10.4.2008)

3.2. Fieldwork results: Dominican Republic

The main field research took place in the Dominican southwest, or to be more specific: in the mountain communities of the municipalities of La Descubierta (Province of Independencia) and Neiba (Province of Bahoruco). This region is one of the poorest regions in the D.R., with around 47% of poor people and 30% living in conditions of extreme poverty in the late 1990s (ONAPLAN 1997). The population of the mountain villages is living almost exclusively on the basis of agricultural activities (e.g. coffee, beans, livestock). In the valley, small-scale intensive agriculture, and to a lesser extent, fishing and mining, are the most important economic activities. In the bigger villages and cities of the region, the Dominican state is the main employer by offering jobs in the sectors of education, health, agriculture and military (McPherson & Schwartz 2005).

The Dominican southwest has been strongly affected by deforestation until the 1980s. Since then, reforestation programs succeeded in reforesting significant parts of the region. Nevertheless, some areas, above all those in proximity to the Haitian border, still suffer uncontrolled logging and its

12 The author encountered the same pattern during his field research in Hueyotlipan and Benito Juárez (municipalités in western Tlaxcala, Mexico)
13 Remaining in charge of the office in Port-au-Prince also during the latter period
consequences. During the passage of hurricanes and other tropical storms, the absence of forests (which serve as natural barriers) leads to landslides, further erosion of topsoil, inundations and even to flashfloods in the valley communities near Lago Enriquillo. Such was the case as a result of the flood in 2004, where dozens of houses where washed away by the strong flows of the river (see picture 4). Around 2,400 people lost their lives due to the flashfloods, most of them in the Haitian towns of Mapou, Fond Verette and the Dominican border town of Jimani. In the case of Jimani, a major problem – in addition to deforestation – has been the settlement of areas in the natural riverbed of the Río Blanco, a river passing right by the town.\textsuperscript{14}

\textbf{Picture 4: Satellite Pictures of Jimani before and after the 2004 flood}

\begin{figure}[h]
\centering
\includegraphics[width=0.6\textwidth]{jimani_2003.png}
\caption{October 26, 2003}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=0.6\textwidth]{jimani_2004.png}
\caption{May 30, 2004}
\end{figure}

\textit{Source: ASTER Science Team in Gubbels & Brakenridge 2004}

In the following quote, José Contreras (INTEC Santo Domingo) gives some insight into the causes of the flashflood of May 2004:

\begin{quote}
The majority of the houses which were lost during the tragedy of Jimani were located in the former riverbanks. But the rivers may regain their former natural banks. That’s where we had a serious problem of erosion, a problem that was exacerbated from the Haitian side. They eliminated all forests, so that a kind of
\end{quote}

\textsuperscript{14} For a detailed description of the hazard in May 2004 see Gubbels & Brakenridge 2004
bottleneck was created on the hill, a kind of a dike with a small water reservoir. For years, water accumulated over there and this water did not find a way out. Down in the valley is Jimani; and if you know it, perhaps you have seen that the hill is on one side and the village is located downhill in the valley. So what happened is that during a few days there was too much rain and the bottleneck could not withstand it, so it burst and the water went down to the valley. The majority of killed people were Haitians, but there were also many deaths on our side, it was a terrible catastrophe.

Even though the 2004 flashflood was an extreme event, floods are a recurring problem in every period of heavy rainfall. During the qualitative interviews, many local villagers complained about the environmental problems in their communities, with floods, landslides, deforestation and soil erosion being the problems mentioned by most respondents. The following citation from an interview with a farmer in Sabána Real, a small border village of only a few dozen inhabitants, gives an insight into the economic impacts of the recurring floods:

Floods come quite often. Our animals are dying then and we also suffer because in only a few days we lose all of the little bit we have. For example, if I produce avocado and have a good production; and suddenly a disaster occurs, we lose everything. [...] Last time when the storms came, we had lots of white beans sowed, but we lost all of it. No authority came over here, neither public ones nor private ones. When we think that the authorities come to help us, they just don’t show up. [...] Crops are declining, either because of droughts or because of heavy rainfalls. These are the phenomena which are affecting us. The soil is losing its strength.

(Franklin, 38 years, male, Sábana Real / La Descubierta)

Besides the insight into the destruction of the economic basis, this quotation also shows the dissatisfaction with the authorities, complaining that no support arrives at the remote mountain villages. Another interview shows one of the central root causes for soil degradation, namely the method of logging and burning trees for land clearance:

We are working the lands here too often, which also fosters the degradation of soils. Most people generally think that ‘taking the torch’ [land clearance by burning trees] is the easiest way to sow, because many just don’t have enough resources to prepare their lands for sowing, that’s why the torch is chosen. That should not be the idea, the idea is to do the best you can, to make some natural barriers\(^\text{15}\) and then to sow, but for

\(^{15}\) So-called “living” and “dead” natural barriers, i.e. plants or stone-walls and similar barriers to prevent erosion in case of heavy rainfalls
economic reasons people think that ‘taking the torch’ is the best option.

(Jorge Santana, 28 years, male, Apolinar Perdomo / Neiba)

But in most cases, environmental problems are rather seen as additional push-factors than as the most important root cause for migration:

Well, sometimes the villagers feel that their resources are not sufficient any longer to subsist on their own over here, so they go to La Descubierta [seat of municipality] and over there they are looking for jobs, with family members or some other place where they could get some payment. They are looking for other ways to live as they know that they can’t subsist over here. That’s why they are leaving.

(Ximaria, 36 years, female, Pinos del Edén / La Descubierta)

In the qualitative interviews, most interview partners stated that they are indeed affected by environmental problems such as droughts, tropical storms, heavy rainfalls and floods. At the same time however, they argue that the main problems are missing social services (schools, health service etc.) and the neglect of the agricultural sector on part of the government (cancellation of subsidies etc.). The following excerpt from an interview with a local NGO-leader who migrated to Spain in the early 1990s and returned to the village of Pinos del Edén (about 1 hour motorcycle drive on a dirt road from the municipal center of La Descubierta) shows the problems of missing educational and other governmental institutions in the mountain area:

Sure, environmental problems also played a role when I decided to leave. If you are living here, depending on agriculture, and you see that it is not giving enough for your subsistence, well, then you have to think about doing something else – and leave. Without enough income from agriculture, how will you build a house for your children, for when they grow up and go to school and need more space. That’s what many of us have to do: leaving our village in order to work in La Descubierta [seat of municipality] and to have space for the kids. But the problem of emigration will continue in our villages, it is already something traditional. The children are the first ones who migrate to the urban areas [attending advanced schools beyond primary], so the parents have to look for means to support the kids who are receiving secondary education, to send them economic support and also to be able to give them food at home. So it’s a double spending – and agriculture as an economic basis is just not enough to support two families: your children as students and as your own kids at the same time. Therefore, many are leaving to La Descubierta, or even further away. […] We don’t have state institutions over here, except for two, public health and education, nothing else where those people of our community
who received some education could get employment. If we would have more job opportunities over here, the better educated would also stay in their villages and we would not suffer from population decrease. But well, as there are no such public policies, no incentives for the countryside and no support for farmers to work with more efficient and sustainable methods, the emigration will continue. If there would be investment programs, infrastructure, and well-planned public policies, the majority of the people would not need to emigrate from their village.

(Ximaria, 36 years, female, Pinos del Edén / La Descubierta)

The above interviewee's statement shows the complexity of migration decisions in the region of analysis. The insufficient income from agricultural production, aggravated by missing state support and environmental degradation, pushes the villagers to look for other sources of income. Children have to be sent to other communities in order to receive education beyond primary school, which implies high costs for their parents (housing, food, transport). Therefore, some villagers even decide to leave their community and move to the same place where their children attend school (in this case, mainly La Descubierta). When the children finish advanced school and received a higher grade of education, a return to their village of origin is unlikely as job opportunities are missing. Consequently, above all, young people decide to leave their place of origin:

Yes, it’s above all the young people who migrate, men as well as women. Sometimes the men send their women to the capital [Santo Domingo] or to Spain, in order to get a job over there, so that they can get some resources and send it back here. Later, they take their husbands with them, and then also their kids. That’s why the houses are empty. At Christmas time, they always come, but after the holidays they leave again for their work. This is above all typical for couples; it’s their life strategy.

(Miguel, 29, male, Pinos del Edén / La Descubierta)

“My brother emigrated to Spain a few years ago, as things are getting more and more difficult over here. The young people don’t want to adapt and migrate in order to look for a better life. [..] Income from agriculture is not sufficient anymore, so they leave. Personally, I don’t see migration as an option, I rather see it as a failure. But in some situations, emigration is the only way to resolve problems. If I would migrate, I would only leave temporarily, earn some money and then return to my community.

(Francisco, male, 38 years, El Copey / Neiba)
As this quotation shows, migration is not always seen as a solution for the problems the villagers are confronting, but rather as ‘ultimo ratio’. In general, the interviewed villagers had a very emotional relation with their home communities. Nevertheless, seven out of ten interviewees see emigration as a viable option, mostly stating that up to now the opportunity to leave has not appeared yet. The “tipping point” for most respondents would be the appearance of a natural disaster like a long drought or a hurricane, which would destroy the basis of economic subsistence.

**Pictures 5a & 5b: View of deforested mountains near La Descubierta**

![View of deforested mountains near La Descubierta](image)

*Source: Photos taken by Stefan Alscher in March 2008; the picture on the right shows smoke arising from the other side of the mountain, which possibly is due to land clearance*

The statements gathered via qualitative interviews are also supported by the questionnaires (total = 30). 27 out of 30 respondents see missing social services as a main reason for emigration. While in the group of non-migrants (= people living in affected areas) environmental problems are not seen as a main motive for migration, the migrants themselves see problems such as slow-onset degradation and low security of harvests as important or very important motives (11 out of 15). Also 11 out of 15 migrants stated that they left their place of origin partly because of environmental problems, and 12 out of 15 think that environmental problems may affect a future decision to migrate. 10 out of 15 migrants are not planning to leave their actual place of residence. Both migrants and non-migrants have family members who have emigrated (25 out of 30), mainly to Santo Domingo (18 out of 30) and Spain (11 out of 30, many of them to Barcelona). This confirms the mentioned migration pattern from the Dominican Southwest to the capital city Santo.
Domingo and urban centers in Spain. However, most non-migrants are not planning to leave their actual place of residence (13 out of 15), mainly because their situation has improved.

Dominican experts in environmental studies as well as in migration research agree that environmental factors do play a role in migration, mainly because of the impact of environmental degradation for small-scale agriculture, which is the basis of life for a big share of the population in rural areas. The Dominican Southwest is one of the most affected areas – and when comparing it to areas which have more fertile lands, the impact on migration becomes obvious. Nevertheless, it is questionable if environmental degradation is the central factor for migration, as other factors do play an important role for emigration, such as missing social services in remote areas and the withdrawal of state support for small-scale agriculture since the 1980s. The following excerpt of an interview with Dr. José Contreras from the INTEC in Santo Domingo gives an overview on principal root causes for Dominican emigration:

But I would say that concerning the reasons for emigration, partially the natural resources do play a role, even though I would not say that this is the principal one. The fundamental reasons are poverty in general, only few opportunities, very high unemployment – and if you look more into detail, if you manage to interview Dominican migrants, you will see that 80% of them are people of low education, many of them even are illiterate. Sure, some of them may have even a professional training, but the majority of them have a low level of education. People have not found opportunities over here [in the D.R.], so they are working as simple workers in other countries, where their income is higher than they could achieve over here. For them, it is definitively a result with a positive balance, but I would not dare to say that environmental problems determined this. You can consider it as a component, but I see it more as a socioeconomic problem: poverty, unemployment, missing opportunities, lack of social investment by the governments. That means that governments practically have not had a policy to deal with poverty, to give the people more possibilities and to generate more employment.

(José Contreras, INTEC Santo Domingo)

Given the fact that public policies against poverty are close to absent, the remittances sent back by emigrants are of growing importance. In several interviews, villagers were confirming that remittances have become a substantial part of their family income. The importance of remittances also becomes obvious when walking through Dominican towns: in the region of fieldwork, every little town and even villages had at least one Western Union / Vimenca\(^\text{16}\) office (see pictures 6a and 6b on next page).

\(^{16}\) Grupo Vimenca is the Dominican partner of Western Union and the most popular service for receiving remittances
Furthermore, differences in the type of houses of those who receive remittances on the one hand and those who do not receive them on the other are highly visible. The local interview partners underlined the importance of receiving remittances and referred to the different types of houses, stating that many brick-built ones are of those villagers who have family members living abroad, while the simple wooden houses are of families without any relatives in Europe or the United States (see pictures 6c and 6d). Taking into account this expression of social differences, it is questionable to what extent remittances really support the development in sending regions of migrants, or if the private character of these resources rather deepens social inequalities.

Pictures 6c and 6d: Remittances and house constructions
As internal as well as international migration is predominantly female in the case of the Dominican Republic, some researchers observe an “expulsion of women from rural areas”. Women are looking for alternatives in domestic service and forced to migrate to urban centers or even abroad.\textsuperscript{17} Agroindustrial mono-cultivations are exercising pressure on traditional (and more sustainable) systems of agricultural production (see Portorreal 2007). By employing a male rather than female labor force, women are forced to leave their region of origin in order to look for new sources of income. Job opportunities are often found in the service sector, not only in international destinations like Spain, but also in national destinations like the municipal or provincial centers, the capital city of Santo Domingo – or in the tourist areas on the Dominican coastline, where the female labor force is needed in the hotel and restaurant sector.

A worrying peculiarity in the Dominican-Haitian border region is the existence of strong prejudices against Haitian migrants. Many villagers in the region of fieldwork were blaming Haitian migrants as responsible for deforestation and soil erosion by applying their traditional scheme of “chopping and burning” trees for land clearing and expressed their fear of an “invasion” by Haitian immigrants (a fear which is partially fostered by politicians, see section 1.3. in

\textsuperscript{17} Interview with Fatima Portorreal, INTEC, Santo Domingo, 6.3.2008
this report). The problem of uncontrolled logging and burning is also reflected in Dominican newspaper articles.\footnote{“Deforestan en Sierra Bahoruco para carbón y llevarlo a Haití”, in: Listín Diario, 23.6.2008.}

But the major problem is deforestation and soil erosion, because in former times this was an area covered completely by forests. If you look around over here, you will see right away that this forest will not regenerate. Since the Haitian emigrants have arrived and occupied the forest parts, they are applying their method to plough the land with a pickaxe and pull out all the stumps of trees that could have the opportunity to grow again, so there is no chance for regeneration. When the heavy rainfalls come, the whole vegetable layer is washed away, it goes to the Lago Enriquillo down in the valley.

(Ximaria, 36 years, female, Pinos del Edén / La Descubierta)

Over here, it’s all populated by Haitians, the whole Bahoruco [here referring to provinces of Bahoruco and Independencia] is populated by Haitians. Of those houses which are not occupied, where the owners have migrated and left back their homes, many are empty. Others are occupied by Haitians, but they normally pay to the owner.

(Miguel, 29, male, Pinos del Edén / La Descubierta)

Some villagers even mentioned the probability of violent conflicts in the future. Most did not mention that Dominican emigrants from the same villages are those who lend their lands to Haitian migrants – and in fact are making profits with the land use by sharing the revenues from the harvest. Furthermore, experts on Dominican-Haitian relations such as the former Secretary General of the Association of Caribbean States Rubén Silié underline that the demonstration of Anti-Haitianism towards “strangers” is a typical pattern in the border region, while in the everyday life Dominicans and Haitians are living together in peace, which is also proven by the existence of mixed marriages in that region.\footnote{Interview with Ruben Silié, FLACSO, Santo Domingo, 17.3.2008} This view is also shared by Juan Artola, actual Chief of Mission of IOM Mexico and former Chief of Mission of IOM Dominican Republic and Haiti:

The border is a fiction, because there are many mixed families, family relations, patron saint’s days, churches, sport parties etc. There are also many Haitians who – living in Haiti - going every day to work in the Dominican Republic and return to the border area. You can see this in the area of Pedernales [extreme Southwest of the D.R.], a mountainous area where you can walk on small trails right besides the borderline. From there you can see the trails on the other side; those who cross the border [undocumented] on a daily basis are visible over there. [..]

\footnote{“Deforestan en Sierra Bahoruco para carbón y llevarlo a Haití”, in: Listín Diario, 23.6.2008.}

\footnote{Interview with Ruben Silié, FLACSO, Santo Domingo, 17.3.2008}
Furthermore, there are several border markets which are characterized by a very active exchange of goods, the biggest one is in Dajabón [border town in the Dominican Northwest]; so there are people who are coming from the other extreme of the Dominican Republic to sell their products over there.

(Interview with Juan Artola, IOM, Mexico City, 10.4.2008)

But despite the exchange of goods and cross-border relations, there are also signs of further problems between the Dominican population and Haitian immigrants. In late October 2008, a wave of violence against Haitian immigrants swept through villages in the province of Bahoruco. After the assassination of a Dominican “motoconcho” (motorcycle taxi) driver by a Haitian, thousands of Dominicans went through the streets of Neiba, armed with machetes, sticks and knives, chasing Haitian immigrants and burning their homes. Until October 29th, at least 3 Haitians had been killed by the mob, dozens suffered injuries. The Dominican government sent soldiers to several towns in the provinces of Bahoruco and Independencia and closed the border temporarily. Taking into account the level of aggression and given the fact that these events were not the first violent expressions of Anti-Haitianism in the Dominican-Haitian border region, it is questionable if a peaceful coexistence of Dominicans and Haitians will be achieved in the near future.

4. CONCLUSIONS AND FUTURE RESEARCH

Findings from the fieldwork as well as the literature review indicate a linkage between environmental degradation and migration processes on both parts of Hispaniola Island. While this linkage – at least at first sight – is quite obvious in the Haitian case, it is more complex in the Dominican Republic.

The high grade of deforestation, soil erosion and land degradation in Haiti strongly influences the migration decisions as the economic basis and consequently the livelihood of a big share of the population is threatened or even completely destroyed. Even though many respondents did not perceive environmental but rather economic problems as a major root cause for migration, the environmental threat of a weakened agricultural industry, does invoke movement given that agriculture remains to be the main source of income for the majority of the Haitian population.

In the Dominican Republic, similar problems of environmental degradation are observable, even though they are less intense than in Haiti. Similarly, factors other than environmental ones play an important role in the decision to migrate. The main reasons mentioned by most interview partners during the fieldwork, experts as well as local population, were the withdrawal of the state from the countryside, the lack of subsidies for the agricultural production and lack of social infrastructure, above all in the schooling system. Environmental degradation, mainly deforestation, soil erosion and the impacts of tropical

storms (flooding, landslides) aggravate the existing economic problems and therefore accelerate the decision to migrate.

The findings from the fieldwork also support the widespread hypothesis in migration research that the poorest tend not to migrate internationally. While the actual Haitian migration flows are mainly internal or (‘international’) intra-island flows (from Haiti to the D.R.), Dominican migration is rather directed towards the United States (often via Puerto Rico) and to selected regions within Europe, even though internal migration is also an important issue within the D.R. and often serves as a stepping stone for international migration. Another interesting fact is that Haitian immigrants are increasingly filling those gaps that Dominican emigrants are leaving behind, especially in the case of the rural areas near the borderline. This is an indication of a certain ‘hierarchy’ in environmentally induced migration, a pattern which can be observed in migration processes in general. Migrants from the poorest regions (in this case, from Haiti) replace migrants from less poor areas (D.R.), resulting in shorter distances of migration for the former and enabling the latter to move over longer distances.

Finally, it is important to underline that this case-study is only a snapshot of the existing problems. Further research is necessary in order to gain a deep and well-grounded analysis of the nexus between environmental problems, conflicts and migration on Hispaniola Island. For a better understanding of that nexus, studies in other regions than the border area would be helpful for the purposes of achieving cross-regional comparisons. A special focus, also for policymakers and international development agencies, should be made on the interethnic relations between Dominican, Dominico-Haitians and Haitian immigrants. Haitian immigrants should be included in the environmental education programs, which are realized by several international NGO’s in those regions affected by deforestation. Also the research on the Haitian side of the border should be broadened, as the author of this report was not able to conduct in-depth fieldwork in Haiti. The results of the subcontracted fieldwork are not sufficient to draw strong conclusions based on empirical evidence.

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ANNEX 1

List of Interviews:

- Hans Koeppel and Manuel Sänger, German Consulate, Santo Domingo, 29.2.2008
- Bridget Wooding, FLACSO, Santo Domingo, 3.3.2008
- Martin Schneichel, GTZ Santo Domingo, 3.3.2008
- Manuel Hernández Ruigómez, General Consul of Spain, Santo Domingo, 6.3.2008
- Josefina Gómez, Univ. Iberoamericana, Santo Domingo, 6.3.2008
- Fatima Portorreal, INTEC, Santo Domingo, 6.3.2008
- Lorenzo Marcelini, Roberto Antuan II, Kelly Pérez, Centro Cultural Dominicano-Haitiano, Santo Domingo, 6.3.2008
- German Consulate, Pétionville/Haiti, 10.3.2008
- Visión Mundial Jimaní, 11.3.2008
- Benito Hernández, La Descubierta, 13.3.2008
- Patricio Cuevas, GTZ La Descubierta, 13.3.2008
- Ximaria, Pinos del Edén / La Descubierta, 14.3.2008
- José Altagracia, Artemio Ferrera, Wagner Ferreras, Pinos del Edén / La Descubierta, 14.3.2008
- Evangelio Novas, Ángel Bienvenido, Asociación de Agricultores ‘La Esperanza’, Ángel Félix, 14.3.2008
- Franklin Rosario, Sábana Real / La Descubierta, 14.3.2008
- Jorge Santana, El Copey / Neiba, 15.3.2008
- Fam. Montero, Neiba, 15.3.2008
- Simón Florentino, Visión Mundial, Neiba, 15.3.2008
- José Contreras, INTEC, Santo Domingo, 17.3.2008
- Ruben Silié, FLACSO, Santo Domingo, 17.3.2008
- Catherine Cattafesta and Miguel Silva, Universidad Nacional Pedro Henríquez Ureña, Santo Domingo, 17.3.2008
- Juan Artola, Chief of Mission IOM Mexico, Mexico City, 10.4.2008