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### CANNABIS CULTIVATION AND DEPLETED FOREST AREAS IN THE PROVINCE OF TAOUNATE (RIF SOUTHERN, MOROCCO): LANDSCAPE AND FCONOMIC REPERCUSSIONS

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#### I. INTRODUCTION

In recent decades, Morocco and in particular, the area corresponding to the Rif, has seen an increase in the amount of land dedicated to cultivating cannabis and the production of its derivatives (especially hashish), despite the measures taken in 1992 to make illegal.

This article analyzes the increased cannabis cultivation and the parallel process of deforestation occurring in the Taounate Province (Southern Rif), especially in its northern part, between the communities Ghafsai and Khlalfa, south of the traditional nucleus for cannabis cultivation in BabBerret and Ketama, in the Central Rif.

This study and its analysis were completed by developing an intensive fieldwork (conducted in two periods: September-October of 2008 and April- May of 2009) and consulting various statistics, in particular, the amount of complaints registered in the judicial archives in Taounate Province related to illegal brush burning.

The deterioration of natural and environmental conditions coupled with the loss of natural heritage (represented, in particular, by the richness of the forests) are significantly related to the increased amount of land devoted to growing cannabis.

Additionally, the increase in cannabis cultivation leads to a higher standard of living in the populations dedicated to it and, therefore, higher expectations in a hostile environment devoid of genuine development projects, despite previous attempts.

In the evolution of geographic knowledge and the Rif territory, three phases related to the development of a historic, economic, and political context can be distinguished:

- A first exploration period, which runs from the late nineteenth century to the early twentieth century, that is dominated by geographical discovery that preceded and accompanied the start of the colonization stage and the Protectorate.
- A second period of colonization corresponds to the Spanish Protectorate (from 1912-1956, approximately) and in certain areas with the French colonization, whose main objective was to get an understanding for the economic exploitation of resources and strategic action.
- With the independence of Morocco, and from the sixties onward, a new third stage develops, the period of university knowledge, especially fruitful in the area of geography, which will transform over the years into the period of academic and scientific knowledge of the Rif territories.

The issue has been more seriously addressed since the beginning of the current century, largely because of the phenomenon's growth since the 80's and the economic, social, and environmental repercussions that derive from it.

In the literature review conducted in preparation for this article, we can see the question being addressed from a variety of perspectives, both from the economical point of view (by its internal consequences, in the form of economic growth, and by its external consequences, through the relationship between contraband and drug trafficking) and from the cultural perspective (by the significance given to drug use and consumption), passing under the political eye (alternative actions), geostatistics (the Rif's situation in the context of the Straits of Gibraltar), and environmental (impact on landscape change, etc.).

This article expands upon the aforementioned perspectives and brings light to an aspect hitherto poorly studied: the expansion south from the traditional region for cultivating cannabis, the Central and Western Rif (Chefchaouen Province), to the Southern Rif (northern Taounate Province). After an empirical analysis of the phenomenon and detailed account of the impact deforestation and soil depletion processes have on the environment and land-scape, we will examine some statistics that haven't been considered until now, particularly the existing records in judicial archives related to illegal forest burning.

## II. THE RECENT DEFORESTATION PROCESS IN THE SOUTHERN RIF: NORTHWEST OF TAOUNATE PROVINCE

This process of deforestation stems from a current expansion in the amount of cultivated land used for cannabis production. In the 1950's, the land used for cannabis cultivation was primarily in the area surrounding the highway that connects Chefchaouen and Targuist, in the Ghomara region of the Central Rif.

Since the 1980's, the expansion of cannabis cultivation has been spreading throughout the South, in the low mountains of the Rif, in the southern part of the Chefchaouen Province and in the northern part of the Taounate Province, and in particular, in the area surrounding the Ghafsai and Khalfa communities.

The evidence gathered both in the field and through analysis of the production statistics affirms that the appearance of cannabis cultivation in this region is indeed the main factor contributing to the accelerated deterioration of the natural vegetation, i.e., the forested areas.

# III. THE GROWTH OF THE AREA DEDICATED TO CANNABIS CULTIVATION IN THE CENTRAL RIF AND ITS EXPANSION SOUTH

It should be noted that since the first decades of the twentieth century, the forest area of southern Central Rif has experienced an ever increasing regression that can be divided into three stages, depending on its severity.

- Stage 1: The Colonial Period (1912-1956). In this stage, the first law relating to forest heritage in Morocco was drafted. In 1917, French colonization published the Law Relating to the Forest, establishing parameters for the use of forest areas. A critical issue with the law was that the indigenous population did not assimilate to the idea that the forest was a communal grazing area that had customarily been used as such. Therefore, the habitants of the Rif continued depleting the forest by cutting and trimming the branches of the trees, primarily to feed their cattle.
- 2nd stage: First Period of Independence from 1956-1995. During this stage, the rate of deforestation slowed down. The Western Rif Economic and Rural Development Project (D.E.R.R.O.) has taken various measures to restock the conifer population since it first began in 1961 (UN/FAO). It has come to represent the first project in the fight against erosion and to improve the living conditions after gaining independence. However, the deterioration process persisted largely due to the fact that the shepherds could not find alternative grazing area other than the forest.
- 3rd Stage: Second period after Independence, from 1996 to present. Starting from the Ketama region, the land dedicated to cannabis cultivation begins to extend south from the Central Rif.

# IV. DEFORESTATION AND THE INCREASED CANNABIS CULTIVATION IN THE GHAFSAI AND KHLALFA COMMUNITIES (NORTHWEST TAOUNATE PROVINCE)

The extent and direction of cannabis cultivation and the increase in forest fires are closely related.

In the rural community of Khlalfa, just north of the city of Taounate, there has been a steady growth in cannabis cultivation since 1995. This growth is a direct consequence of deforestation and the increased number of forest fires.

Between 1998 and 2007, the number of offenses due to forest clearing increased significantly, demonstrating the close relationship between the extent of cannabis cultivation and deterioration of the mountainous environment ecosystem, leaving foresters overwhelmed by the breadth and complexity of the phenomenon.

In the late nineties, deforestation practices had expanded to not only affect the native forest, but the repopulated forest areas as well. Other direct, but secondary, factors exist that explain the process of forest deterioration.

Among these factors include day or night grazing, collecting firewood for heating, and wood for the artisan industry and construction of houses. In the last five years, this deforestation has reached an alarming point. Local authority involvement in the fight against cannabis cultivation has caused the farmers to look for alternative locations. Since approximately 1997, the Low Rif mountains have become the last refuge for cultivating cannabis.

As a result, the vegetation covering the area is being quickly destroyed without any kind of consideration. Farmers see their behavior as a kind of compensation for the prohibition of cannabis cultivation in the lowlands.

#### V. FINAL CONSIDERATIONS

There are multiple, but distinct, factors behind the increase in the amount of land dedicated to cannabis cultivation as an important and justified economic alternative for the rural population living south of the Rif, two of which are relevant. On one hand, farms dominated by grains gradually became marginally profitable for farmers in the area.

Farms in the Rif, characterized by the predominance of micro-property, underemployment, and the use of outdated and technologically insufficient techniques, do not provide enough food to feed the dense, ever growing population. Furthermore, a comparison between the profits generated by the cultivation of cannabis and those representing the barley crop could explain the increase in the former's cultivation.

Therefore, the prohibition of cannabis cultivation in farms cannot be successful without a global political economy that agrees to diversify employment opportunities and to raise the living conditions of the area in question.

Cannabis cultivation and production, and its subsequent smuggling, is a reality in northern Morocco, especially in the Rif area, and is rooted in the historical tradition and, more recently, the concessions granted to the Rif during Morocco's independence process.

Although abolished in 1992, cannabis cultivation in the Rif has seen recent expansion south, occupying many municipalities in the provinces of Chefchaouen and Taounate, and serves as the basis of economic growth and support for many farmers and rural residents in a densely populated area.

In this sense, it is safe to say that there exists an unspoken agreement, a status quo, between local authorities and farmers, whose effects can be seen in the form of economic growth and in the depleted vegetation.

It is a difficult balance that leads to corruption, smuggling, and marginalization of legal economic channels disturbing responds to the challenges that the development of the regions of Northern Morocco need.

It is of utmost importance that we look for environmentally-friendly development alternatives, bearing in mind that this is one of the most impoverished areas of Morocco with a high immigration rate (most often to Spain).