

Hearth Fuel Acquisition and Use in Morocco's Imnane Valley

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Wood and woody biomass are the main sources of domestic energy for most rural communities in developing countries. Increasing population pressure has resulted in a local depletion in the world's supply of wood fuels, especially those wood supplies located near human communities that depend on them for energy. This deforestation causes loss of water and soil quality through erosion, decreased biological diversity, and can result in fuelwood shortages for the communities that depend on wood for cooking food. When a community experiences a fuelwood shortage, it is necessary to implement coping strategies in order to manage resources and insure the availability of sufficient domestic energy.

The purpose of this study is to examine how individual households implement resource use coping strategies to manage decreasing fuelwood availability. My study draws from my experience and work as a Peace Corps Volunteer in Morocco. During my two years of Peace Corps service I worked with Toubkal National Park, which assigned me to live and work in the small village of Ouanskra in the Central High Atlas Mountains.

As a Peace Corps Volunteer, my job was to work with the village community and assist them in implementing community based development projects. As a component of my broader work I conducted a domestic energy survey to determine how village households acquired and used biomass and butane fuels. My survey included interviews with each household, and although limited to one village, provides a complete representation of the fuel use behavior of all village households. 2

In the next chapter (Chapter 2) I discuss basic background information for Morocco in terms of the country's political, physical and human geography. The political geography orients the reader to the spatial location of Morocco and describes the country's regional associations. The physical geography briefly describes the country's landforms and climate. The section regarding human geography describes some of the country's historical, cultural, and economic background. It also includes a description of some differences between Morocco's urban and rural environments.

In Chapter 3 I discuss the regional background for the Central High Atlas Mountains. First, I describe the physical geography and the features that distinguish it from other regions in Morocco. Next I describe the human geography in terms of how human communities utilize the resources of different altitudinal environments. Then I focus on communities in the region's upper river valley environments and describe them in terms of culture and resources. Following this, I discuss my study area, the village of Ouanskra, in terms of those factors that distinguish it as a specific community relative to other upper river valley communities. Finally, I finish the chapter with a section on the resources and economy of Ouanskra. This section includes a description of the village's farm systems, the significance of labor, the relationship between labor, gender and age, the role of energy in the community and the relationship between energy and fuel.

In Chapter 4 I discuss the background for information and literature regarding fuelwood use and acquisition. I begin with a broad description of the significance of fuelwood globally and proceed to a more narrowed focus on the consumption of fuelwood in Morocco. Next, I discuss the role of gender in fuelwood acquisition and labor. Then I describe the relationship between labor and fuel resources.

Finally I describe some of the coping strategies communities use to manage fuelwood shortage.

In Chapter 5 I discuss my study methods. I begin with an introduction describing how my research began. Next, I discuss my informal research techniques. Then, I discuss my formal research techniques.

Finally, I describe my method of data analysis.

In Chapter 6, I discuss the results of my study. This chapter includes a description of the factors found to be associated with fuel acquisition, factors found to be associated with fuel use, factors found to be associated with fuel technologies, and a summary describing the relationship between those factors.

Conclusions and recommendations are discussed in Chapter 6. First, I discuss my results in the context of broader fuel wood conceptual framework. Then I describe my recommendations for further study and research relating to fuel use in the Central High Atlas Mountains. Following this is an appendix containing the results of my statistical analysis. In Chapter 4 I discuss the background for information and literature regarding fuelwood use and acquisition. I begin with a broad description of the significance of fuelwood globally and proceed to a more narrowed focus on the consumption of fuelwood in Morocco. Next, I discuss the role of gender in fuelwood acquisition and labor. Then I describe the relationship between labor and fuel resources. Finally I describe some of the coping strategies communities use to manage fuelwood shortage.

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