

Natural Resources Management and Community Development United States Peace Corps

Adam Wilson

Community Resource Book

Douar Ait Hmad (31°5'N – 9°30'W), Commune of Imin'tlit
Province of Essaouira

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Introduction

This document is a summary report of the U.S. Peace Corps Morocco's "Natural Resources Management and Community Development" project concerning the Commune of Imin'tlit in the Province of Essaouira. Imin'tlit is situated within the Arganerae Biosphere Reserve in the valley to the north of Mount Amsittene. This report summarizes the ecology, agriculture, and economics of the region as revealed through participatory analysis and other sources. It also describes several possible development projects for the community.

The Commune of Imin'tlit, while relatively small (population 5,119), has been selected as one focus of an international effort to conserve and manage sensitive areas in the Mediterranean Region. This project, *Gestion et conservation des sites sensibles en matiere de biodiversite* has a local focus, SMAP/Essaouira, which is headed by ENDA Maghreb. It is a

joint effort of several non-governmental organizations (the WWF, The Chouala Association of Education and Culture – ACEC, and the local Imin'tlit Association for the Development and Protection of the Environment) as well as Governmental bodies (Moroccan Department of Water and Forests, Ministry of Education, and Ministry of Agriculture) and has received funding from the European Union. In addition to other activities, this project has performed research resulting in the creation of three reports (in French): An environmental diagnostic of the Amsittene Forest, a socio-economic diagnostic of Imin'tlit, and a study of the rural tourism potential of the Province of Essaouira¹. The centerpiece of the socioeconomic diagnostic is a survey undertaken in 2000 that questioned 90 families (15% of total) in the Douars of Ait Hmad, Ait Skri, and Ait Slib. This survey is the source of most of the statistics (unless noted otherwise) in this report. These reports, in combination with the application of Participatory Analysis for Community Action (PACA) tools for the past two years, have formed the basis of this report.

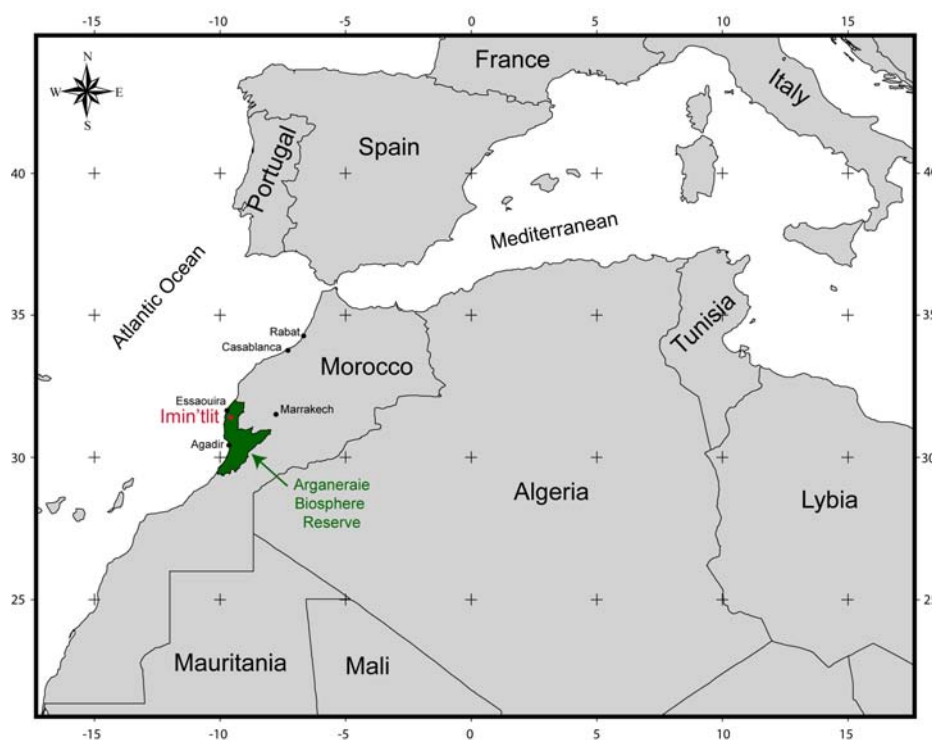


Figure 1: Map of Morocco illustrating the Argan Biosphere Reserve and Imin'tlit

Geography and Ecology

The rural Commune of Imin'tlit is situated in the Province of Essaouira, 60 km southwest of the city. The Commune is bordered by Sidi el Jazouli to the north, Tacoucht to the east, Imgrad to the south, and Smimou to the west. The commune rests in the valley to the north of the Amsittene Massif (31°15 - 31°5 N; 9°45 - 9°30 W). This formation is 20 km long east-west and 10 km wide north-south, forming the southern border of Imin'tlit. The

¹ *Diagnostic Environnemental de la foret d'Amsittene ; Diagnostic Socioeconomic de la vallee T'lite ; Etude du Développement du Tourism Rural dans la Province D'Essaouira.* Short and Medium Term Environmental Action Plan (SMAP). Conservation et Gestion des Sites Sensibles ; Développement d'un Réseau Méditerranéen. Reports provided by ENDA Maghreb <http://www.enda.org.ma>

mountain is covered by about 9,000 ha of forest dominated by thuya (*Tetraclinis articulata*) and argan (*Argania spinosa*).



Figure 2: Imin'tlit valley with Mount Amsitene in the background

Arganerae Biosphere Reserve: The Argan Tree

The site is located within the Arganerae Biosphere Reserve (29°15' - 31°20' N; 8°10' - 10°25'W), which is composed of more than 2,560,000 hectares in southwest Morocco. The Reserve covers a vast intramontane plain bordered by the High Atlas and Anti-Atlas Mountains and the Atlantic Ocean to the west. The primary focus of the Reserve is the preservation of the Argan tree. This tree is long lived (125-150 years), with some species living for an estimated 200-400 years². Endemic to Morocco, the argan forest covers almost 800,000 hectares and makes up about 7% of the total forest cover of the country. This tree is extremely well adapted to drought, low nutrient, rocky soil, and other difficult growing conditions. Its presence holds thin, overgrazed soils together and provides sheltering shade for several species from the sun. The primary threat to the tree is excessive human exploitation from the over-collection of its fruit (which are used for oil, fuel, and animal feed), grazing pressure of domestic goats that actually climb the tree to eat the leaves and fruit, and over collection of wood for fuel and construction³. These pressures have resulted in little or no regeneration of the tree. Virtually all trees in the commune are mature, many showing signs of old age, and there are very few young trees to replace them when they die.

² Moussouris, Yorgos. Alan Pierce. "Biodiversity links to cultural identity in southwest Morocco: The situation, the problems, and proposed solutions." *Arid Lands Newsletter*, No 48, Nov/Dec 2000.

³ Arganeraie Biosphere Reserve, Biosphere Reserves Directory, United Nations Educational, Scientific and Cultural Organization (UNESCO). 2004 <http://www.unesco.org/mab/index.htm>

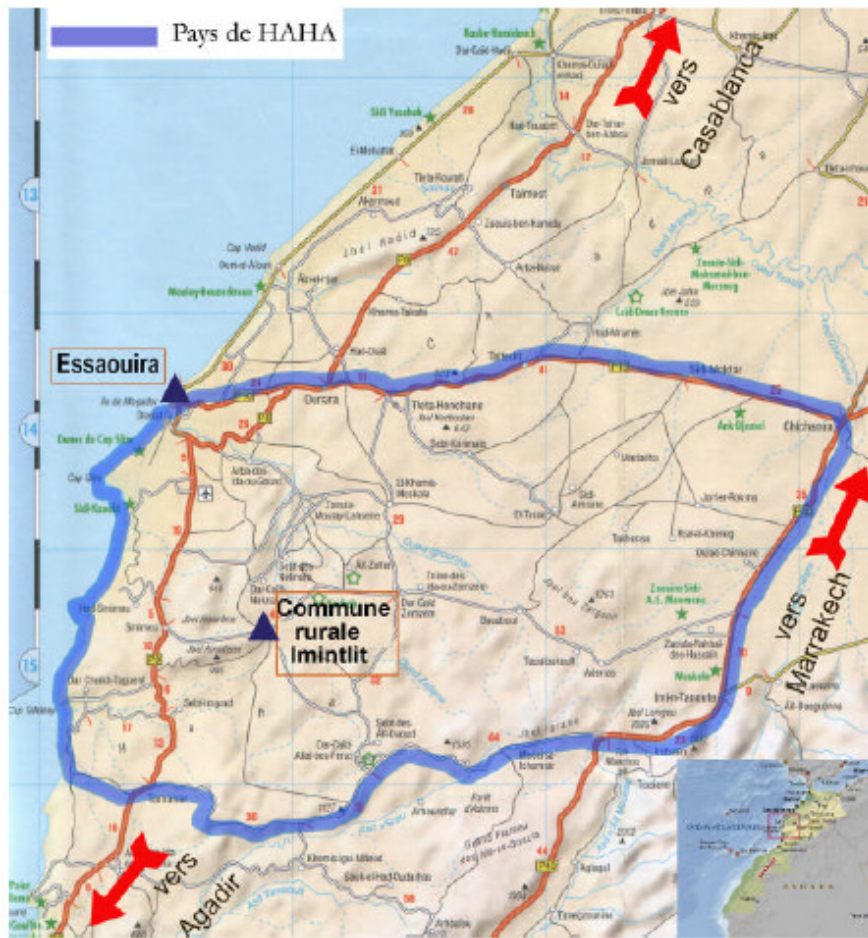


Figure 3: Map of the HaHa region

Amsitene Forest and Essaouira’s famed Thuya Wood

To the south of Imin’tlit is Amsittene Mountain and a 9,000 ha forest. A portion of this forest has been designated as a Site of Biological or Ecological Interest (SIBE) and the entire forest has been ‘protected’ against overuse of resources (at least on paper). The forest is dominated by thuya and has a wide diversity of plant and animal species. The community uses thuya for construction and firewood (see energy section). In addition, thuya wood is in high demand in Essaouira for use in the creation of the highly aromatic and beautiful wood products for which the city is known. This, in addition to grazing pressure, has led to many areas of the forest being degraded. There are three forest guards permanently assigned to patrolling and maintaining the forest. In collaboration with the Eaux et Forêts, Adam Wilson developed a field-guide to the plants of the forest. It includes well over 100 of the most common species and will hopefully serve as a resource for forest management and future eco-tourism development.

Population

The Commune of Imin’tlit is composed of 10 douars ranging in size from 61 to 1,396 in population (see Table 1). Ait Ahmad, the largest of the douars, includes the Commune Center and weekly (Monday) souq for the region. According to commune statistics, the population has been slowly shrinking over the past few years. This is mostly due to the “rural exodus” of primarily young men seeking a better life in the city. These individuals usually continue to support their families – their contribution accounts for 20% of total income in the commune. The vast majority of people in Imin’tlit are illiterate (73% of men and 98% of women). This

gender difference is also apparent in higher education. Of those in the commune with a university degree, 92% are men. However, this phenomenon is slowly changing as girls are staying in school longer and both genders are continuing their studies beyond primary levels.

Table 1: Population of Imin'tlit by douar from the 1994 census

Douar	Population
Ait Ahmed	1,396
Ait Skri	752
Id Otmane	245
Ibourache	592
Id Elharch	179
Azmaine	1,373
Louda	250
Taurirte	118
Imzilene	61
Timssourine	153
Total	5,119

Income and Lifestyle

The people of Imin'tlit live a fairly traditional agro-pastoral lifestyle. Herding alone supplies an estimated half of all income to families in the commune, followed by arboriculture (20%). The remaining occupations, commerce, forest exploitation, and artisanal, make up another 10%. As previously mentioned 20% of income to the commune is from family members that have emigrated.

Animal husbandry is the dominant occupation of the commune. By population, goats are the most common animal (54%), followed by sheep (31%), donkeys (10%), cows (4%), mules (1%), and camels (<1%). Goats, sheep, and cows are bred for meat (and cows for milk), while donkeys, mules, and camels are used for labor and transportation. These animals are fed primarily by grazing in the nearby forest (35%) and crops grown for feed (51%). This exerts a huge pressure on the forest that is evident in the lack of undergrowth, stubby trees, and absence of regeneration, especially in the margins of the forest near douars.

The agriculture of the region is a mix of tree and surface crops. The surface crops are primarily barley (52%), corn (21%), fava bean (12%), chick pea (10%), and wheat (5%). In addition, many families have small garden plots with tomatoes, potatoes, peppers and a few other vegetables. These crops are grown primarily for consumption, but excess is sold in local markets. Arboriculture consists of four predominant trees, olive (*Olea europea*), almond (*Prunus dulcis*), carob (*Ceratonia siliqua*), and argan (*Argania spinosa*). The products of these trees are both consumed locally and sold. About 75% of olives and olive oil produced in the commune are consumed by the family, the remaining 25% sold in local markets. These proportions are reversed for almond products. Nearly 100% of the carob harvest is sold for export.

In addition to grazing their animals, collecting wood, and harvesting argan in the forest, people also collect medicinal and aromatic herbs. While there are dozens of species collected, the most common are thyme (*Thymus sp.*), cistus (*Cistus sp.*), lavender (*Lavandula sp.*), and thuya (*Tetriclinis articulata*). These plants have potential to be a source of income for the commune, but care must be taken not to over-exploit the resource.

Facilities / Market

There are two markets a week in Imin'tlit. The large Monday souq has a wide variety of food and household goods. Fresh vegetables, fruit, meat, plastic ware, and other household goods are all available. The much smaller Thursday souq has only a limited supply of vegetables and virtually no other household goods. Other services of Imin'tlit Center include a primary school that goes up to level 6, as well as two local potters, butchers, carpenters, shoemakers, barbers and masons.

The health clinic of Imin'tlit services the 10 douars mentioned above staffed with one nurse and equipped with the most minimal of necessities. Though there is a doctor assigned to the clinic, she only comes to work a few weeks a year. Currently the clinic does not have working electricity because of an unknown structural problem. This results in the use of propane for both vaccinations in need of refrigeration and sterilization methods. The clinic is not equipped with a birthing center and does not have access to an ambulance. We've been told the only conditions an ambulance from Smimou would travel to Imin'tlit is for the most severest of accidents. The nearest birthing center and ambulance services are 17 km away in Smimou. Access to these services relies on inconsistent taxis that at low peak hours may be unavailable. The nearest hospital for emergency services, surgery and specialists is 60 km. away in Essaouira.

Energy Consumption

In Imin'tlit, energy is used in the kitchen for cooking and in the rest of the home for lighting. In the kitchen, wood is used for about half (46%) of all cooking, followed by propane (40%), and the shells of the argan nut (14%). However, consumption varies by proximity to the forest, with homes closer to the forest using more wood and less gas. According to the survey, household use varied from 1 kg/day to an exorbitant 100 kg/day of wood, with an average of 16 kg/day. Extrapolating from this average to the total number of households in the commune adds up to over 9,500 kg of wood being burned per day, much of which is harvested in the Amsittene forest. However, some wood is harvested from private land and other forest areas. The people of the commune are permitted to collect dead wood from the forest, however it is clear that people regularly collect green wood.

For lighting, the ENDA survey reported that 79% of people use candles, 11% have electric, 7% use gas, and 2% use solar power. However, since the survey was completed, availability of electric has increased. Our experience has been that most homes have electric. In addition to lighting, electric is also used to power TVs and their associated satellite receivers, cell phones, refrigerators, and other electronics.

Waste Management

There is no solid waste management in Imin'tlit. In the souq area, garbage is discarded wherever convenient, which has resulted in a plethora of plastic bags, cartons, boxes, vegetable waste, and other products being strewn everywhere. Occasionally (such as when an important visitor is expected), commune employees rake the garbage into piles and burn it in dozens of small, smoky fires. The river bed (which is dry in summer), is another common disposal point, resulting in layers of garbage covering the channel. When the rains come it is distributed downstream throughout the commune on its way to the sea. Douars outside of souq and not near the river generally burn their own garbage.

Liquid waste is also a problem, especially in the dense housing in the souq area. Most homes' wastewater (from the kitchen, laundry, and other washing) drains to the narrow streets that wind between homes. This results in a channel of wastewater, algae, and other refuse forming the center of the paths on which people must walk to get to their homes. Children (through their lack of care) and the elderly (due to their lack of mobility) commonly walk

directly in this channel of waste. For the homes that have toilets, this waste is generally channeled to some sort of tank within the house. It is unclear how this waste dissipates.

Tourism

Imin'tlit receives little tourism. While the number of visits is not recorded, it seems to average about one party (of 4 or 5) per week. Most tourists come to visit the Tamounte Argan Cooperative and do not visit or spend money anywhere else. There are also tour groups that offer horseback tours through the town, but all needs (food, transportation, etc.) are covered by the company. In the past few months, a few tour groups have started offering Imin'tlit as a destination for day trips from Essaouira. This translates into little benefit for the local population other than the women at the cooperative. The people seem ambivalent about the tourists, but complain that they don't get any benefits from their visits. The Environmental Association has identified eco-tourism as a potential source of revenue for the community and has begun projects to encourage it. ENDA has worked with the Association to create a gite in Ait Hmad to house and feed tourists, as well as provide information on the region. In addition, ENDA is working with other agencies to create an "eco-tour" of the region that would focus on Imin'tlit.

Transportation

Public transportation to and from Imin'tlit is fairly easy and inexpensive. From Essaouira (5-10dh) and Agadir (40-60dh) there are frequent buses and grand taxis to Smimou (17 km) west of Imin'tlit. From there grand taxis run continuously from 7 in the morning until 6 or 7 at night (during the summer) to Imin'tlit (5 – 7.5 dh). There is also a bus that runs once a day from Ait Daoud (30 km east of Imin'tlit) to Casablanca, stopping in Essaouira (10dh). It passes through Imin'tlit at about 6:30 a.m. heading to Casablanca and 4:30 p.m. heading to Ait Daoud. For the most part drivers are courteous and helpful.

Water

The current water supply of Imin'tlit Center consists of three wells and three cisterns. The main drinking well is a closed system with a pump house and water tower. The well is 154 meters deep and pumps 2 liters/second. This system is occasionally treated with bleach in the pump house and provides water to five public taps in different locations around the town center. The other two wells are traditional hand dug wells that are not covered. Two large cisterns provide water to people for animals and household need and the school has its own cistern. The health clinic sporadically treats the open wells and public cisterns with bleach tablets.

The outer douars in the Commune of Imin'tlit have a variety of hand-dug wells that are not covered. My few observations of further douars concludes that most of the wells that provide for these communities are old wells, typically uncovered and in need of repair.

The douar has several hygiene and sanitation problems. Current water sanitation problems are most directly related to the distance most people must travel as they rely on one source for potable water. ENDA statistics state that 17% of households are 15 minutes from the potable water source, 44% of cases are 15-30 minutes away and the other 39% is 30 min. or more from the water source. Most water is transported in jugs via donkey from the taps to the home. The constraints of distance create sanitation challenges such as water contamination during travel, arrival and storage contamination. With the need for farther households to conserve water, household hygiene suffers. Many families use untreated water for drinking and dish washing. The process of getting and maintaining a clean water supply takes investment of both time and money. Therefore, most households do not have good hygiene and sanitation practices. The result of this is the general lack of hygiene and

sanitation in the bathroom, kitchen, cistern, cleanliness of children (including dental hygiene) and little use of soap and bleach products.

Commune and Associations

There are a number of organized groups in the region. The Commune of Imin'tlit serves as the governmental body for the individual douars, the environmental association coordinates development and environmental activities, the argan and honey cooperatives organize individuals around a common goal. In addition, in the spring of 2006 a new women's center opened in the center of the village. All of these groups are fairly new and have provided a new means for the people of Imin'tlit to work together and achieve their goals. However, for many, the cooperative ideals of sharing responsibility are new and people are skeptical.

Commune of Imin'tlit

The Commune of Imin'tlit, formed in 1992, serves to unify the douars in the valley. It has several noted goals.

- Define plan of economic and social development and carry out development activities
- Create organizations for public services and management (water, roads, etc.)
- Stop, within the limits of the law and the conditions of conservation, the exploitation of the natural resources.
- Inform people about projects implemented by the government.
- Report on local affairs to government officials.

The commune has also served to represent the rights of the people during the changing management priorities of the surrounding forest. The commune reserves the following rights, based on Title IV⁴.

- Temporary occupation of the forest for career-related reasons, such as herding
- Right to hunt and fish
- Right to extract dead wood, wood for construction, brushwood, herbs, and plants of industry/medicine
- Right to graze animals in the forest

Environmental Association

The local Imin'tlit Association for the Development and Protection of the Environment was formed in October, 2002. This association (headed by Hassan Idlamchour), has the following objectives: to cultivate a spirit of cooperation and partnership, to contribute to the economic development, and to contribute to the preservation of natural resources. The Association has identified 6 projects as priorities, including:

- Improvement of access to potable water
- Creation of a birthing center
- Improvement of roads
- Environmental education in community
- Development of tourism
- Creation of argan and honey cooperatives
- Management of the Imin'tlit Women's Center

⁴ Dahir portant # 1.76.350 du 25 Ramadan 1396 (20 Sept 1976)

Since the Association is fairly new, most of these projects are still in the conceptual stages. However, the argan and bee cooperatives are both in operation. In addition, with the help of ENDA Maghreb, the association has created a gite to accommodate tourists for meals or overnight.



Figure 4: Association President inspecting water tower project

Tamounte Argan Cooperative

The Tamounte Argan Cooperative (<http://www.tamounte.net>) has been in operation since 2003. The Cooperative employs about 25 women, who are paid both for how many nuts they collect from their own trees or public trees in the forest, and the amount of nuts they crack to for the production of oil. From this process, the Cooperative produces a nutritious cake for camels and other livestock, shells that are burned for fuel, a cosmetic oil, amlou (a sweet almond paste), and flavorful oil for food. The latter three products are designed for sale predominately to tourists, as the prices are almost three times that of similar products (though of lower quality) for sale in the community. The Cooperative is also working to provide Arabic literacy classes to women in the community and serves as a meeting place and community center for the women involved.



Figure 5: Habiba at the Women's Cooperative

Issafaren Bee Cooperative

The bee cooperative is currently made up of seven members with about seven hives each. All the hives are kept at the president, Mohammed Idlamchour's house (the father of the president of the Environmental Association). The co-op has lost a few members due to a lack of commitment and immediate profits. Later, when the co-op is stronger and has a good reputation, the group plans to expand with more members. The co-op is supported by ENDA and was provided most of the equipment and training needed for operation. Members plan on continuing to attend training sessions offered in the region. The market for the honey is still being developed, but with ENDA's help the honey will be brought to Essaouira and sold from there. Due to the many medicinal herbs (thyme, cistus, lavender, and thuya) in the area, the honey has the reputation of being "good medicine" and is likely to fetch a higher price than honey from other regions. The co-op was formed late in 2003.



Figure 6: Men checking the beehives at Issafaren

Imin'tlit Women's Center

The Women's Center opened in April of 2006. The center is a result of a collaboration between the local association, commune, ENDA Maghreb, the Agency for Social Development, Ministry of Social Welfare, and Peace Corps. The center will serve as a public space for women and girls to gather, study language, and learn crafts.



Figure 7: The girls at the new women's center and their first woven blanket

Ait Slib Medicinal Plants Cooperative

Between Imin'tlit and Smimou is a new medicinal plant cooperative. They currently have two small greenhouses and two outdoor gardens. In April 2006, they received funding to for the construction of a new building. While not yet fully functional, they hope to eventually distill essential oils, make soaps, and package dried herbs. ENDA Maghreb supports this project.



Figure 8: Wild lavender

Aslale Bed and Breakfast

The President of the Imin'tlit Association has converted part of his home into a bed and breakfast for visitors to the village. His house is in Tiggmi n Ghalim, about two kilometers outside of the town center and near the base of Amsitene Mountain.

Potential Projects

Building on the work of the SMAP project, there are several potential projects that fit in with the goals of the local environmental association, Peace Corps Morocco and the Eaux et Forêts.

Eco-tourism

Creation of an 'eco-center' in Imin'tlit to serve the local population as well as a source of needed information for tourists visiting the area. This idea was developed by the SMAP project⁵ and has been confirmed by the Environmental Association as a potential project.

Potable water supply and other health projects

The commune has a water project currently in progress to bring public taps closer to the houses bordering the forest in Ait Hmad. The project would bring water about a kilometre

⁵ Action #5, *Etude du Développement du Tourism Rural dans la Province D'Essaouira*. Short and Medium Term Environmental Action Plan (SMAP). Conservation et Gestion des Sites Sensibles ; Développement d'un Réseau Méditerranéen. Reports provided by ENDA Maghreb <http://www.enda.org.ma>

closer to 4 douars, 53 families, and 244 individuals. The Environmental Association has completed part of this project, but currently does not have the funds to finish it.

Solid Waste Management

A sustainable solution to the problem of solid waste management will be extremely difficult. The recent increase in the availability and consumption of packaged products and bags has not been accompanied by an ethic regarding what to do with the garbage. Any project that deals with garbage (such as construction of a small incinerator) must be accompanied by extensive education encouraging its use.

Tree Planting

There are several areas around Imin'tlit that are severely degraded and would benefit from a tree planting. However, it would be difficult to plant trees without providing protection from the goats. There is also great potential for tree planting within the market area and along the streets. This could make the market area a much more pleasant place than it is now.

Contacts

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