

Protecting traditional property rights under conditions of change: Production of plant oils as a community-based enterprise in the High Atlas Mountains of Morocco ^{1/}

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Abstract: In the High Atlas Mountains of Morocco natural resources are declining due to over-harvesting and population pressure. The situation is exacerbated through lack of secure land tenure, political representation, and empowerment on the part of local people. They have since a long time been involved in harvesting local aromatic plants and sold the herbs in a small-scale and informal economy. The over-utilization of natural resources affects a number of these aromatic plants, particularly sage and thyme.

Macro-level policies aimed at decentralizing development are currently being implemented. They aim to address natural resource degradation, poverty and out-migration. In this connection a project to distil essential plant oils and process herbal products was established in the El Maghzen village, and an *alembic* (used for distilling essential oils) was installed by the Department of Water and Forestry. This decentralized distillation project is the only one in the region and represents a major economic opportunity for local people. However, the villagers have never taken part in any major commercial venture before. Furthermore, lack of secure tenure to the areas where the plants are gathered, together with lack of political representation and empowerment are key obstacles to sustaining this economic opportunity.

Under the traditional *Jamaa* institution, customary law gave local people access to land in order to harvest medicinal plants and collect wood for purposes of cooking and building. Over time the Department of Water and Forestry has assumed ownership over most of the land, while under a new agreement in connection with the project local people will hire land from the Department of Water and Forestry for purposes of harvesting plants. An ongoing research project is investigating and evaluating this development project. In applied terms, it aims to look at the implementation of the enterprise, with a special focus on gender issues.

Key words: *aromatic plants, economic development, natural resource erosion, decentralisation, property rights, traditional knowledge.*

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The general aim of the study is to better understand the mechanisms of implementation and effects of decentralized enterprise on the traditional ecological knowledge of a Berber rural community experiencing increased integration into the national and global economy. The research is ongoing, and this paper is based on a restricted amount of data that is yet to be fully analyzed. It is part of a global research project for which the author will be critically analyzing the introduction of decentralized essential oil distillation in the High Atlas of Morocco, with special reference to the role of gendered traditional knowledge.

INTRODUCTION

In the face of a growing national and international demand for essential oils and other herbal products, aromatic plants like thyme (*Thymus saturoides*) and sage (*Salvia aucheri*) growing in the High Atlas Mountains are over-harvested, extracted by the roots, often before flowering, a practice that seriously jeopardizes their long-term sustainability. Furthermore, due to its location on the higher mountain flanks, sage has an important role to play in soil fixation and its anarchic harvest has become a serious threat contributing to soil erosion. The demand for these plants is high and the villagers exploit them mainly for cash crop purposes rather than for local medicines, although both men and women possess a strong knowledge of medicinal plants, which are widely used by local people and healers in the absence of an accessible biomedical infrastructure.

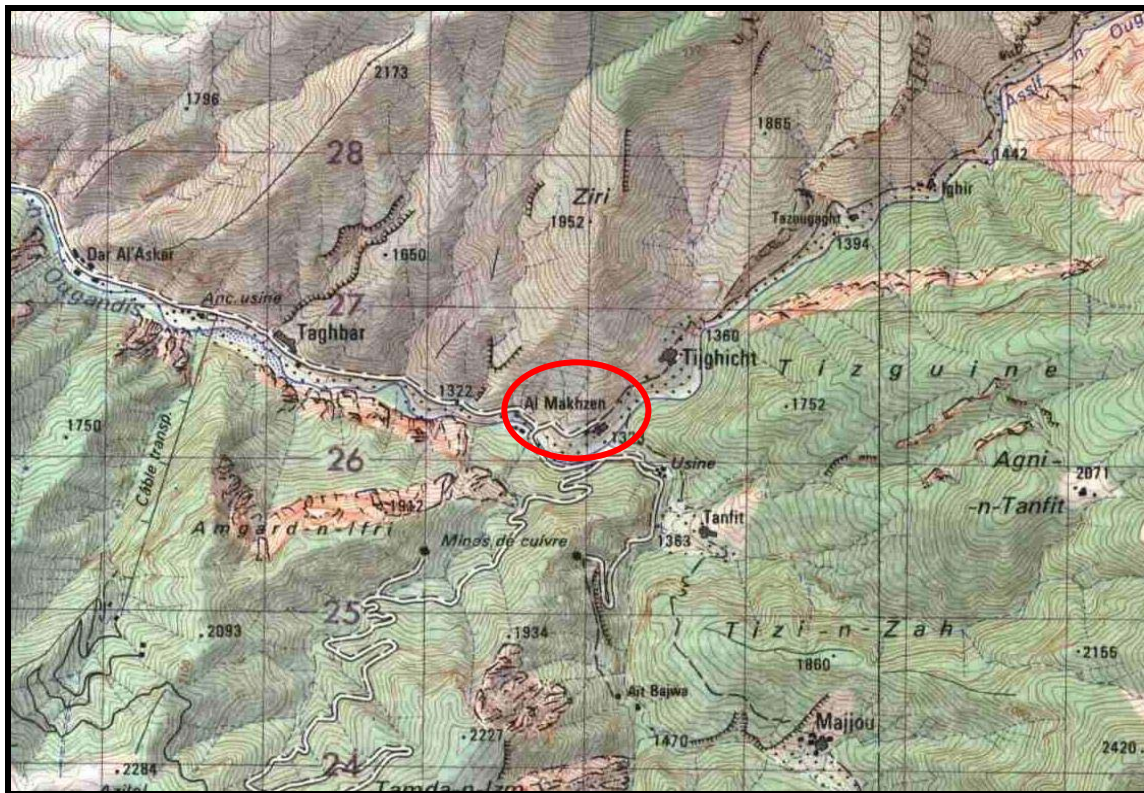
As a response to the continuing degradation of these natural resources, and to combat poverty and out-migration in the region, an *alembic*, or unit for distilling essential oils, has been installed by the Department of Water and Forestry in the village of El Maghzen. This “decentralized” essential oil distillation project, which is the only one in the region, represents a major economic opportunity for local people. The inhabitants of the villages have never taken part in any major commercial venture in the past other than the harvesting of thyme and sage and their onward sale through informal channels. According to Benaboubou (2004), the harvesting of thyme is particularly important for women’s income that increases during the harvest season according to the amount collected. Therefore, the project aims to create financial opportunities and empowerment for the local people, not by increasing harvesting capacity but by adding value through the transformation of raw material into essential oil. An important aspect of this added value is the drying process, as prices paid to the collectors are higher in the dried form than the fresh one. The enterprise should therefore create local employment, training and remunerate local actors according to the specific functions performed.

BACKGROUND

Due to its topographic and geographic position, Agoundis is one of the narrowest and most isolated valleys of the High Atlas, enclosed between abrupt forested slopes, and offering very little cultivable space (see Map 1). The duality of this spatial structure results in sensitive differences in the landscape and in the availability of resources. The steep slopes favour the erosion of the ground, thus necessitating the construction of terraces. As the typicality and diversity of its landscapes have been

shaped by millennia of human modification to control erosion and to promote agriculture, the Agoundis valley has access to remarkable patrimonial and natural values (Gerbati 2004).

Map 1: El Maghzen in the Agoundis Valley



For centuries, the villagers of the High Atlas have practiced a mixture of subsistence cultivation and pastoralism, farming in terraced fields that are cut into the steep valley sides, and grazing herds of goats and sheep in the mountain pastures above. Characterized by relatively high inaccessibility, small population, and a subsistence economy based on crop livestock, mixed farming and local natural resources, villagers manage to sustain themselves by growing barley, almonds and walnuts in terraces of carefully irrigated fields (Crawford 2002, Saxena et al 2001). Forests in the mountains provide wood for cooking, construction, and heating homes, as well as forage for animals. Today, Morocco is developing rapidly through international market integration and tourism but these people still represent one of the poorest segments of the Moroccan population in terms of literacy, infant mortality, availability of potable water, and other development indicators (Russel 2003). This poverty has undoubtedly contributed to steadily increasing pressures on the local environment during the last century, as locals have lacked alternative sources of income.

In ancient times, the inhabitants of the valley had the freedom to access the land for their personal needs, e.g., harvesting medicinal plants, and collecting wood both for purposes of cooking and as building material. The right to land passage for grazing, access to forests and water was extremely important and a traditional way to

manage natural resources. This took place under the traditional *Jamaa* constitution, a flexible system with a complete integration of decisions and actions within the global functioning of the community; a traditional autonomous, internal management.^{3/} This traditional customary law, not clearly defined, used to regulate not only individual but also collective action as well as cultural and political life of the tribe (Id Balkassm 2002). Throughout the history land tenure arrangements that various governments tried to implement in the area, the local people would always fall back on this customary law especially in times of confusion and conflicts over land access. In 1917, a law was passed under the French protectorate, where the local people were still allowed to access land, water and resources but with implied restrictions, as the land became state owned. Indeed, it became absolutely forbidden for people to exploit medicinal and aromatic plants towards lucrative financial ends. Today, the *Jamaa* has been mainly in many cases by village associations and the main decisions are taken at the commune level, often by the official local authorities.

In 1942, the Toubkal National Park became a protected area for its fauna and flora, state owned and recognized as a national park. The Department of Water and Forestry took control of the newly protected area, surrounding villages, and common land, and became responsible for development, delivering coupons to the local people for the right to harvest medicinal plants.

Then in 1976, a communal chart was established, trying to promote the participation of local people in economic forestry development. It stipulated that 20% of all exploited forestry goods had to be paid to local communes, which in turn had to reinvest it into local forestry development. The 1980s saw the beginning of an interest in biodiversity hot spots, in which Morocco occupies a second place in the Maghreb region. Funding started to pour in from organizations like GEF, which stepped into further supporting biodiversity development strategies. More recently, organizations like GTZ, UNDP and FIDA joined in to support biodiversity programmes, natural resources conservation and poverty alleviation, incorporating two major criteria: a will to combine natural resource conservation with local development and participation of local people, and accordingly requesting them to stipulate their needs. At this point, the creation of village association was introduced in order to support central authorities. The status of association was also a good tool to mobilize local voluntary action.

FAILED PROJECTS THROUGHOUT MOROCCO

Boujrouf (1996) presents examples of three different projects that have taken place in several mountainous regions of Morocco over the past 30 years (see Table 1). The Moroccan government together with the aid of international agencies had endeavoured to bring economic development to these areas. Examples include a farming project in the Western Rif Mountains in 1961, which aimed to find solutions to the local erosion and the flooding phenomenon frequently taking place in the Gharb valley. Along with its other priorities, the project sought to resolve the problem of the local migration, seeking to improve the standard of living for the local people. This was supposed to be achieved by restoring the local economy through modifying

^{3/} *Jamaa* is a type of birthright, a customary law only attributed to the local people.

land uses and modernising agricultural techniques. The project also aimed at improving road structures, health and education.

A similar development project took place in the Middle Atlas in the province of Ifrane in the 1980s. Again, the Moroccan authorities supported by international agencies implemented the project. The objectives were to produce more efficient and more productive pastoral land management with less but better quality herds, introducing the animals with new food habits (fed with imported forage) to protect forestry heritage. Part of the programme was to limit forestry access in order to reduce its overexploitation. Herds were prohibited from accessing depleted areas. Added to this was the introduction of new techniques such as tractors, seeds and pesticides to produce an intensification of agriculture and the implementation of culture rotations.

The last example that Boujrout cites is the Tabant experiment, a pilot study in the Central High Atlas. The project was conducted between 1985 and 1993 and took place as part of a Franco-Moroccan partnership. The aims were to develop local employment by promoting tourism in the region, putting emphasis on training mountain guides, a network of structures with the inhabitants to welcome tourists on the strength of mountain treks.

In hindsight, these three projects, which aimed to fight desertification and deterioration of natural resources proved to be failures. And, as Boujrout clearly puts it: these projects were technocratically conceived, with very specific goals in mind, that is, the guarantee of available potable water and water irrigation in the urban plains, to secure the urban world's needs for hydro-electric power, and to protect and prevent the migration of mountain people down to the cities. What is more, these projects lacked coordination, at the national level (inter-ministerial) as well as at the local level (local administrations). Also prevalent was the absence of local consultation and participation, which further aggravated incomprehension and hostility on behalf of the local people. Further, there were important gaps between the initiatives, allocated budgets and the actual implementation done in the field. Too often, these projects served a minority of bureaucrats taking advantage of these types of actions to increase their economic domination and to reinforce local power.

International and multilateral agencies have since endeavored to include local people and are clearly more concerned with resource sustainability and poverty alleviation. However, newly designed projects' aiming at integrating participation of local people remains non-implemented and their integration remains a problem. In this particular instance, the government authorities represented by the Department of Water and Forestry remains a hard driven administrative system. This, in turn, does not necessarily mean that initiatives are taken appropriately and accordingly target the issues mentioned above (Ait Hamza et al 2007).

Table 1: Failed projects throughout Morocco

Year	Location	Conditions	Means / institutions	Outcomes
1961	Gharb Valley, Western Rif	Local erosion, flooding, local migration, improvement of road structures, health, education	International agencies and Moroccan government / Restoration of local economy, Modification of land uses, Modernisation of agricultural techniques	Failed. Lack of coordination, national (inter-ministerial) or territorial administrations, local level. Incomprehension, hostility of local people. Gaps in initiatives, allocated budgets, local implementation
1980	Ifrane, Middle Atlas	More efficient, improved production of land management, better quality herds, introduction of new animal foods through imported forage thereby protecting forestry heritage	International agencies and Moroccan government / Limits to forest access to reduce its overexploitation, Herds prohibited from using depleted areas, introduction of new techniques (tractors, seeds pesticides). Intensification of agriculture, Implementation of culture rotations	Failed. Lack of coordination, national (inter-ministerial) or territorial administrations, local level. Incomprehension, hostility of local people. Gaps in initiatives, allocated budgets, local implementation
1985-1993	Tabant, Central High Atlas	Development of local employment, promotion of tourism in the region, training of mountain guides	Franco-Moroccan partnership / Network of structures with the inhabitants to welcome tourists on the strength of mountain treks	Failed. As above.

Source: Boujrout (1966).

THE SITUATION IN THE AGOUNDIS VALLEY

In the Agoundis valley, El Maghzen was chosen as site for the distillation project because of its accessibility and its availability of natural resources, particularly aromatic plants.

First, village diagnostics were conducted to assess the potential for local development, identification of local exploitable resources, particularly aromatic plants, with the aim of creating and adding value to local products for the benefit of the local people (see Table 2). Following this, the people of El Maghzen as well as surrounding villages were requested to form village associations as part of a “decentralized” approach to resource management. The distillation project was elaborated by international aid agencies, together with public sector institutions, namely Parc National du Toubkal, Department of Water and Forestry, INDH (Institut National de Développement Humain), Ijoukak Commune and CDRT (Centre de développement

et de recherche du Tensift), a local NGO. Each in turn, particularly GTZ, CDRT and INDH, allocated funds in order that the distillation project could begin. The next major step was the negotiation of land access with the Department of Water and Forestry. At the time, not all village associations agreed with the decision to establish the *alembic* in this location and the issue created tensions. However, a certain cohesion seemed to have been achieved even though some surrounding villagers did question why the *alembic* had been installed in El Maghzen and not in their community. Conflicts in this isolated society are experienced and exaggerated through lineage segmentation (Russel 2003, Westmacott 2002). The Cooperative status was created in 2006, giving the local people the right to exploit not only the aromatic and medicinal plants of the valley but all other resources, including agriculture and arboriculture. As part of this process, a total of 12 members out of the 24 founder members from the nine chosen villages were elected to become office members. Villagers from the nine villages were requested to contribute financially and buy shares for the constitution of the Cooperative. For this purpose, the President of the Cooperative approached them to collect these funds. From all parties, this project is highly anticipated and will serve as a pilot project with potential replication to other natural resource management projects (Alifriqui 2006).

Table 2: Key events in the distillation project in the Agoundis Valley

Year	Institutions	Major events	Purpose
2003-2004	Local NGO (CDRT)	Village diagnostics	Assess the potential for local development, identification of local exploitable resources, community involvement
2004-2005	CDRT, <i>Ijoukak</i> Commune	Creation of village associations	Stronger implications of local villages, visits to other similar projects, acquisition of <i>alembic</i> , integration of local central commune <i>Ijoukak</i>
2006	- GTZ, CDRT, <i>Ijoukak</i> Commune, National Park Toubkal, INDH, - Dept. of W&F	Creation of Cooperative	- Autonomy of local population, poverty alleviation, desertification, added value to local product - Aromatic and medicinal plants conservation, resource sustainability
2007	- GTZ, INDH - Dept of W&F	- Construction of a building for <i>alembic</i> under way - Forbidden harvesting	- To install <i>alembic</i> for distillation - To study, assess thyme regeneration
2008	- GTZ, INDH - Dept. of W&F	- Completion of building for <i>alembic</i> - Contract with Coop for harvest	- Sole access and exploitation of aromatic plants for Cooperative

Source: Fieldnotes.

In 2007, the local Department of Water and Forestry, whose primary objective it is to implement a plan for resource management, forbade the inhabitants of the valley to go on harvesting plants. This was originally initiated in order that a study could be conducted to assess thyme regeneration and sustainability. However, in early 2008 the Department of Water and Forestry allowed harvesting to take place on a limited plot of land, restricting the amount to two tons just for the village of El Maghzen. From the authorities' point of view, this limited plot of land has been allocated so that the Cooperative has sole access to the resource, can remunerate its harvesting members, and hence start the whole adhesion process of the local people into a new financial and functional autonomy, tied up to the existing governmental legislation. Most recently, a new measure has been introduced for harvest insurance cover and again villagers are requested to contribute to this, again approached by the President of the Cooperative.

ANALYSIS

Although the land access initiative proposed by the Department of Water and Forestry may be well intentioned, the amount of two tons remains an unrealistic figure taking into account that this represents the amount that one family can harvest in a week only. The permission that has only been granted to El Maghzen will not prohibit other villages from harvesting as the summer harvest represents a considerable income for the household's budget. This will further encourage the onward sale of the harvest through the usual informal channel, as the Cooperative structure does not have the financial capacity to buy thyme from the harvesters of the surrounding villages and remunerate them. In the past, remuneration was assured by a handful of intermediaries and people could rely on the income generated by the summer harvest of thyme and other aromatics. Needless to say that not harvesting last year and this year renders financial matters difficult for the inhabitants of the villages. This raises the dilemma of immediate-applied restrictions and their financial consequences for the household's budget.

Another situation that has risen from this "decentralised" enterprise project is a conflict between involved partner institutions as to who owns the project, to put it into some official representatives' language, a case of "appropriation".

Furthermore, although the designated office members of the Cooperative were well intentioned when the structure was created, a handful of members are now acting on their own accord, to the detriment of others. When first initiated, the project was very much perceived as a light of hope by all, filling people with high expectations. As time moved on and delays occurred, a general disillusion has replaced the hope that was originally generated by the project. In El Maghzen, the centre for the project, the villagers are passively waiting for events to unfold, resiliated to unfulfilled promises. The outside villages are feeling somewhat cut off and left out, particularly as people gave money for share and not heard anything since. This is undoubtedly creating tension; a sense of helplessness and injustice as people simply do not have the financial means to contribute to this end. As one informant put it: "The Cooperative is supposed to help us, and not to financially drain us. We simply do not have this kind of money to pay for insurance, even though when we start working, everyone is quite prepared to make installed payments with whatever he/she can afford. What is more,

we gave money for the Cooperative shares, and have not heard anything about it since. Now, we are suddenly asked for money again, without any sound explanation". This has created resentful feelings amongst people especially in the remote villages.

This further raises the question of interests and motivations on behalf of all involved institutional and non-institutional parties. Following this set of events, another issue that has become pertinent is who will own the essential oil, derived from the distillation process?

CONCLUSIONS

The study so far seems to reveal several major distinct blockages for the successful implementation of the enterprise. Although the local people have a strong desire for socio-economic change and improvement, they do not possess the intellectual or the educational capacity to cope with autonomous initiatives to implement the technicalities of the project. The election of suitable local candidates operating as crucial leaders is therefore of vital importance for assuming responsibilities and initiatives as well as communication to its members through the actual Cooperative structure. As it is, only the President and treasurer of the Cooperative are instrumental in pursuing directives. Other members, especially those more geographically cut-off, are feeling increasingly exploited and disillusioned. Ensuing this, the efficient functioning of the infrastructure is jeopardised, lacking communication, consultation, participation and coordination, creating a sense of hopelessness, isolation and tension between the Cooperative members in the villages.

Hence, for this community-based enterprise to start working efficiently, local authorities must integrate suitable local actors into active participation instead of moving them around like pieces on a chessboard, waiting to be instructed to fulfil top-down directives. Authorities must include them in the very fabric of the project instead of just fulfilling and applying top down national and international guidelines.

The dilemma of this particular case remains one of local actors still remaining isolated, occupying a passive role they do not fully understand, and therefore rendering them unable to partake efficiently in the implementation of the enterprise. The flow of actions has been impeded by a lack of communication and coordination on behalf of the involved institutions. This, together with the administrative burden has slowed down the implementation of the project, which was initiated more than two years ago. While the local authorities may be clearly concerned with the long-term conservation of the resource and the local people's responsibility and empowerment, the current access policy applied by the Department of Water and Forestry regarding the harvesting of aromatic plants is inadequate, not accommodating the local peoples' needs, and not accounting for the poverty dimension that is prevalent among the local people. Furthermore, it is not quite clear whether people will harvest thyme this year as the remuneration and insurance for harvesters is not financially secure within the Cooperative accounts.

Should alternatives not be considered to strike a balance between a traditional system, which used to rule land access, maintaining equilibrium within communities and newly designed directives?

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