

## THE ARGAN BIOSPHERE RESERVE: A FOISON OF PUBLIC AND PRIVATE INITIATIVES FOR THE VALORIZATION OF A TERROIR PRODUCT

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### Introduction

As a melting pot of cultural flows that have characterized the entire Mediterranean Morocco harbors an important agro-ecological heritage. Biodiversity coupled with cultural diversity have been the source of several eco-cultural units, which today are called “regional products”. Each unit is characterized by an agro-cultural product, known as “*terroir*”. Thus, from North to outh, we can cite a certain number of aromatic and medicinal plants, among which cannabis<sup>4</sup>, in the western Rif and a large part of the Jbala , the olive tree in the foothills of the Middle Atlas, the Saïss plain , also the vineyards<sup>5</sup> also in the Saïss, apples in the Middle and Upper Moulouya (Midelt provinces), dates in pre-Saharan palm groves, *damasquina* rose in the Dadès-M'goun basin, saffron in the Central Anti-Atlas (Taliouine) and the argan tree in the area which stretches from the occidental High-Atlas and is extended by the Anti-Atlas to cover all the valley of Souss. The diversity of farming corresponds to the diversity of plant terroirs. For instance, there are several sheep breeds, such as the race of Timahdite in the Middle-Atlas, Beni Guil race in the Eastern regions, *Serdi* of Sraghna race and of Beni Meskine, *demmane* race of Pre-sahara, goats of the Anti-Atlas and camels (desert dromedary). In addition, there is a wide variety of beekeeping products (cf. Simenel et al. 2015).

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<sup>4</sup> Although it is considered an unlawful culture, kif is a specific cultural product of this region and has generated much debate nationally and internationally. The Moroccan parliament is discussing the ways of its recognition and its regulation to make it a sector of local development as in the United States of America which in fact has become a canabusiness channel.

<sup>5</sup> Vitiviniculture is a very old tradition in Morocco, but it was only during the period of the French protectorate that this activity experienced its development (see above).

Until the 1980s, most of these products were consumed locally as *beldis* products<sup>6</sup> (product of the 'countryside'). It was only with the appearance of the concept of *terroir* product, especially in Europe, that these products could benefit from regional or national influence, and even international. Their recognition has increased with the obtaining of various labels, such as Controlled Designation of Origin (AOC in French), Protected Designation of Origin (AOG in French), Protected Geographical Indication (IGP in French), (among others.) as well as UNESCO labeling.

Aware of the diversity of the country's "*terroirs*" and the singularity of the products which come from, the Moroccan government is involved in their valorization, either by the actions of public services or by the recourse to international cooperation. Souss-Massa region, for instance, is the first one to attract the interest of public authorities because of the diversity and quality of its local products, such as Argan, saffron, honey, among others. The valorization and heritage of its products can, indeed, contribute to improving the living standard of the rural population in quest for sustainable development. Although all Moroccan experiences seem globally successful at the national level, the Argan grove entails an in-depth scrutiny, mainly because of the endemic nature of its natural and cultural specificities, its singularity, its significance, its socio-eco-systemic dimensions, as well as the means and actors mobilized for its cultural and economic valorization and its international reputation.

### **1. An endemic ecosystem of southwest Morocco: wealth and risk**

In the southwest of Morocco, the Argan grove represents the last rampart of vegetation facing the Sahara. The Argan tree, or Argan<sup>7</sup>, is a forest species which constitutes a singular ecosystem in its eco-geographic, socio-economic and cultural characteristics (cd. Fig.1). This endemic species comprises a biogeographic area both in terms of diversity and the operation level. The current area of the Argan grove covers about 830,000 acres and stretches from the northern Atlantic coast of Essaouira to southern Tiznit, over a continental depth that can reach 100 kilometers

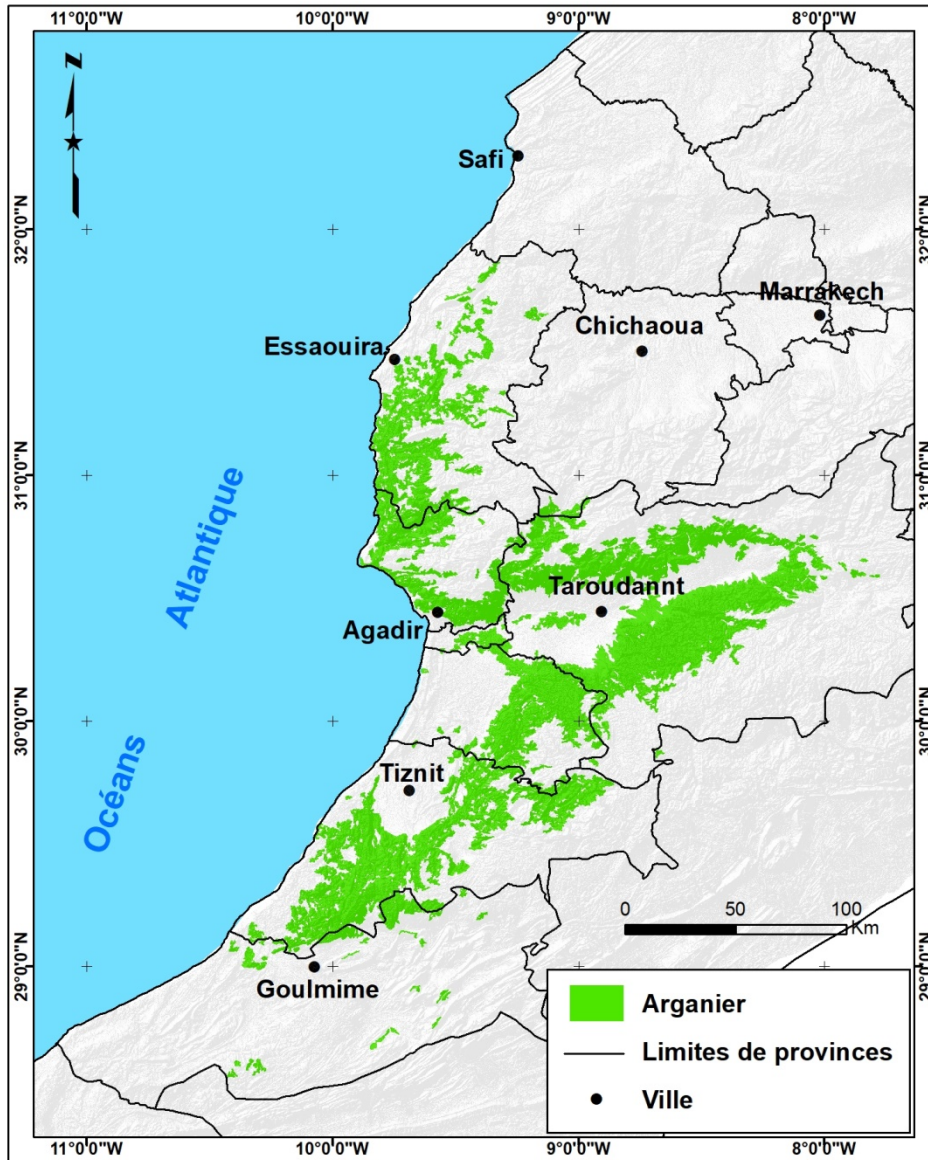
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<sup>6</sup> It is an Arabic term which evokes the concept and the conception of Moroccans of local products, that is to say local products. See on this subject an interesting article by Simenel Roman (IRD, LPED, Marseille: *beldi/roumi*; a Moroccan conception of the product of *terroir*, the example of Aït Ba'amran from the Sidi Ifni region (Online).

<sup>7</sup> Argan in the Amazigh dialect of the region which designates both the tree and the product that comes from it.

with altitudes up to 1500 meters (Msanda, El Aboudi & Peltier 2005, p.357). The largest stands cover the northern slopes (country of Haha), the southern High Atlas and northern Anti-Atlas; that is to say a large part of the Souss basin (Fig. 1) According to specialists, the Argan tree would be the last survivor of the sapotaceae tropical family; it is a species which spread in Morocco in the Tertiary era thanks to a warm and temperate climate. This fact has made it remain an ancient heritage.

The Argan grove indeed offers many economic opportunities through various components (Argan oil, honey, cactus, breeding and recently ecotourism); it may contribute effectively to the socio-economic development of the Souss-Massa region, which is one of the most dynamic regions in Morocco. In south-western Morocco, the Argan tree influences the life of many rural communities which have built a multidimensional relationship with it. This interconnection can even be depicted as integrated, which explains the agrarian system installed there. Indeed, for immemorial times, generations of transhumant peasants have been able to benefit from the Argan tree through several forms of exploitation. For instance, wood, hard and tough, is used in construction and manufacturing of tool; it also feeds the heating system and is transformed into coal. Its leaves feed large herds mainly goat; oil from almonds is a basic foodstuff, without mentioning its more recent use in cosmetic and medicinal products. For its many uses, the Argan tree is considered a *gift from God*. Among the populations, it epitomizes a shop where you can find everything. This mythical tree has developed around it a set of annual or seasonal rituals called *horoms* (sacred), which are practiced in different forms depending on the community. However, all this highlights the magic dimension of the tree. To protect this tree, " *father of all* " as reported by Emberger (1938), the user communities have implemented exploitation codes guaranteed by customs and sometimes rules written on wooden boards (*louhs* in Amazigh language). These latter are prohibited and sanctioned by a penalty unjustified cuts or undertaken without the agreement of the assembly of the wise (*inaflas*). All communities living in and from the forest have a customary law. When the codes are written, the manuscripts are cherishingly guarded in collective granaries (*agadir*) which, by its form and its function, constitutes a sort of fortified bank where all the precious goods of the community are kept including the Argan tree products.



Source : Haut Commissariat des Faux et des Forêts et de la Lutte contre la Désertification

**Fig.1. Geographical area of distribution of the Argan Forest**

Today, the salience of the Argan grove and the heritage associated with it is translated into a number of 7,560,000 days of family work per year for the sole operation of extracting Argan oil<sup>8</sup>. If we add the charcoal production work and the agrarian work related to the Argan grove, the number of working days would amount to ten million (Aziki, 2002, M'hirit, 1998 and El Ottmani, 1986). Considered as “aerial or suspended” pastures, the Argan tree provides the fodder for 2 million heads of livestock.

<sup>8</sup> The Belgian Development Agency estimates that the Argan grove provides, all activities included, 20 million working days, including 7.5 million for women (C. Michiels, 2010).

In addition to its function as a forest tree, the Argan tree is a fruit tree. Its almond is its providential element. This fruit is composed of a fleshy pulp and a very hard core containing the oily seed, wherefrom we extract the precious Argan oil which makes the reputation of the Argan grove and of Morocco nowadays. The fruit of the Argan tree gives rise to a whole of agrarian practice going from the sapling period to the oil extraction. The fruits ripen between June and August and the harvest begins in each zone according to specific practices. First, we set a date to “open” the picking; then, we delimit collective zones, private zones and zones to protect from animals<sup>9</sup>. All of these practices are carried out within the framework of a customary institution known as *agdal*. After picking up the fruits, farmers proceed to pulping, drying and storage of the Argan nuts. Traditionally, we supply ourselves to meet the household's oil needs, and we sell part of the harvest in various forms in local and sometimes regional markets<sup>10</sup>. To obtain the oil, the Argan nuts undergo several operations, such as pulping, crushing, roasting the almonds over low heat in earthen containers. Then, they are crushed in a stone wheel; after that, the obtained dough is mixed with a very small amount of lukewarm water. Finally, the dough is pressed to obtain the Argan oil. The set of traditional tasks are performed by women who have to work 8 to 10 hours to obtain a little more than a liter of oil

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<sup>9</sup> Knowing that the Argan tree is a pastoral tree, in addition to the tender leaves of the tree, the goats eat the fruit pulp and drop the nuts, which are then collected by the shepherd. This represents a significant part of the additional household yield.

<sup>10</sup> Before the 1980s, Argan oil was almost unknown outside the area covered by the Argan tree, today, this product and its derivatives have become a known product worldwide as it will be shown in the following paragraphs.





**Fig. 2. Sylvo-agro-pastoral function of the Argan forest**

Under the shade of the Argan tree, an extensive agriculture is also flourishing, which is well suited to the surrounding ecosystem. It is an essentially rain-fed family farming (*bour*). Rain-fed agriculture is practiced on the slopes or on collective land where barley is often grown. It is a light agriculture, well adapted to the ecological conditions comforted by the tree because the shade reduces evaporation, promotes humus and soil fixation. Irrigated agriculture is practiced in the narrow valleys where water promotes more intensive and sustainable activity (cereals, vegetables, and fruit trees). It is worth noting that this agriculture is subsistence farming.

The Argan tree also constitutes, for its fodder qualities and its tabular form, a "suspended pastoral space" sought after by goats (Photo 1). If the year is wet, the undergrowth produces a multitude of fodder grass grazed by the transhumant herds and is exploited according to a particular socio-territorial organization. This mobile agro-pastoral activity is the result of a great adaptation to environmental conditions of the Argan grove, characterized by an agro-ecological zone subdivision. The Argan grove is an ecosystem of great biological tolerance, which also promotes the development of bee-keeping. The undergrowth, indeed, produces an herbaceous

layer appreciated by bees; beekeeping is, thus, another specificity of Argan grove. Besides the family productions, rural Amazigh populations in the region produce different types of honey known for cosmetic and medical sectors<sup>11</sup>. Around the Argan tree, therefore, are structures and socio-economic practices that result from the different phases of its exploitation. The Argan grove owes not only its reputation to the only tree producing Argan oil but also to the agrarian structures resulting from a long process of environmental adaptation. Because of these multiple functions, certain authors qualify this environment and the practices of its exploitation as *an Argan grove civilization* (Nouaim, 2005, Aziki, 2002 & 2008 and El Fasskaoui, 2009).

Doubtful of these resources, yet fragile and limited, the Argan grove is the object since the beginning of the twenty first century of strong covetousness, and it has to bear a demographic overload and an economic exploitation in perpetual extension. Expansion fronts for greenhouse production of vegetable crops and for citrus growing are opening every day in the plain of Souss, qualified as Moroccan "Eldorado". In an area where water is scarce, this activity draws its needs from the already overexploited underground aquifers. The depth of wells in some areas reaches more than 400 m. In addition, the desire to quickly rebuild the city after the earthquake made Agadir a pole of attraction for a large population. This target is translated in the quest for new terrain geared towards the equipment necessary for the accelerated growing city whose fields of activity are growing, such as agribusiness, mass tourism or industry. As an example of the pressure exerted on the Argan grove, the construction of the international airport and the route linking it to the city of Agadir has required the clearing of over 1000 hectare of the most beautiful forests of Argan, Admin and Mesguina.

We can distinguish two factors of economic growth and urban spread disrupting the ecosystems of the Argan grove. There are some factors linked to clearing actions, and others are related to accentuating the decline in plant cover. The hydrological overexploitation of the plain of Souss forced agribusiness to move further upstream of the plain to the detriment of the Argan grove. The pressure on available resources threatens the ecological functionality of the plain, which the authorities regard as a real crisis. In addition, the drying-up of the water table of the

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<sup>11</sup> As an indication, one kg of spurge honey costs more than 50 €.

Souss plain gives way to infiltration of salt water from the seafront. Therefore, not only are farms located downstream threatened but also drinking water resources necessary to more than 5 million citizens is also searched in the Argan grove. Water must now be transported over long distances. Large consumers of water, such as urban space, mass tourism, agriculture and industry, are also producers of waste waters discharged directly into nature, into wells for the cities of the plain or, in the coastal area, in the sea.

Facing these major risks, policies for the promotion and heritage creation of the Argan grove in a perspective of sustainable development are being implemented by different actors, be they regional, national and international.

## **2. Heritage and construction of Argan as a Local Product.**

The Argan grove constitutes a sui-generis ecosystem in the world and, as such, was classified as Biosphere Reserve of UNESCO in 1998<sup>12</sup>. This label does not mean exclusion from all human activity, as it is the case for national parks or certain nature reserves. The Biosphere Reserves include landscapes with multifarious intensities of use. In the case of the Argan grove, the Reserve consists in reconciling the economic, ecological and social functions in a context of solidarity and equity beneficial to the various components, including human ones. The Argan grove Biosphere Reserve project aimed at providing stakeholders to become aware of the state of the environment and recommendations for a harmonious development framework. After seven years of its nomination of the Argan grove, Moroccan academics promoted the idea of an international valorization for the rural development (Charouf, 2007)<sup>13</sup>. The Moroccan authorities decided later to include the Argan grove in the Representative List of Intangible Cultural Heritage of humanity under the label *Argan, practices and know-how related to the Argan grove* so as to finally recognize its cultural dimension. This second step towards international recognition of the specificities of this tree aims to promote various skills related to its exploitation. It would also constitute a great opportunity for the concerned

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<sup>12</sup> For more information on the philosophy, functions and labeling of the Argan grove, see B. El Fasskaoui, 2009.

<sup>13</sup> Some research institutions (IAVH, INRA, ENGREF, H.C.E.F, IRD and Mohammed VI Foundation for Research and Argan tree Preservation) have shown "the miraculous virtues attributed to Argan oil. Rich in linoleic acid, vitamin E and other essential fatty acids, Argan oil would have protective properties, such as soothing, skin, hair and nails healing, and it would fight against premature cells aging" (S. Romain et al., 2009, p. 55).



communities to launch a new dynamic that revolves around the conservation and valorization of the Argan tree. Finally, it would participate to recognize the know-how of women and to empower them in a context of imbalance of opportunities between genders. In fact, the labeling of the Argan grove which gives it the status of universal heritage commits the competent public authorities to deploy efforts and to implement strategies for the sustainable development of an ecosystem with highly coveted resources.

In the absence of financial means and experience in the management of this type of spaces, Morocco has resorted to international cooperation, in particular to European partners, for the establishment of structures and strategies for the preservation and safeguarding of this natural and cultural heritage of humanity. National (Academics, Ministries, NGOs and local associations) and international development organizations (European Union, IMF, FAO, WB) have suggested and initiated projects to promote and permanently protect this original resource.

The German GTZ ("Gesellschaft für Technische Zusammenarbeit", since 2011, named Gesellschaft für Internationale Zusammenarbeit – GIZ), a company of international cooperation for development on a global scale, is the pioneer organization of foreign partnership in this dynamic. Indeed, the GTZ and its experts first invested at the financial level (54,500,000 Moroccan dirhams or around 5,450,000 €) and scientific to make this ecosystem known to Moroccans before alerting international organizations. One of the objectives in this regard is to obtain recognition from UNESCO as an intangible cultural heritage. To do this, German gurus and their Moroccan partners have highlighted the socioeconomic, environmental and cultural features of the Argan grove in order to link the preservation of the tree and the economic valorization of Argan product through mobilizing the target population (GTZ 2007). The goal of the Argan grove Conservation and Development Project (PCDA) was, according to the head of GTZ, to make Argan oil "*a luxury product*" in connection with the population's and the communities' operators of the Argan grove. In addition, the Argan has always been the deal of women who are also the most vulnerable population layer; the project promoters " have ensured that all actions for the protection and sustainable management of the Argan grove are based on a participatory approach in which rural women are essential partners and targets" (Amzil & Aboutayeb 2014). Thus, 136

women cooperatives have been set up with the help of the European Union who, in partnership with the Moroccan government represented by the Social Development Agency (ADS), financed half of Argan project of 12 million euros, to improve rural women' status through sustainable management of the Argan grove. Other stakeholders, such as the State of Monaco, the Belgian Agency for Development and the Swiss Association for the promotion of Appellations of controlled origin and geographical indications, have also contributed to this development goal.

For its part, the Moroccan government mobilizes all the competent services for the promotion and preservation of the Argan forest. The High Delegation for Water and Forests and for the Fight against Desertification (HCEFLD) is the first public body responsible for the management and preservation of forest areas, and therefore of the Argan grove. Besides participating in actions initiated by other actors, the HCEFLD undertakes legal actions to protect the forest, conducts reforestation and regeneration operations of the Argan grove and sets up the defense of certain overexploited areas or threatened by degradation. The Ministry of Agriculture supports and accompanies the cooperative and associations movement of the "Argan chain" and promotes local products, which were derived from Argan, as part of a yearly trade-fair held by regional and local councils. In terms of management and development of the Argan tree territory, the National Agency of Oasis Zones and Argan tree (ANDZOA), created by the Ministry , has as objective, among others, the reforestation of 200,000 hectares, a quarter of the current area of the Biosphere Reserve<sup>14</sup>. Thanks to the National Initiative for Human Development (INDH), which was launched by the country's highest authority and under its patronage in 2005 to finance and support actions carried out by municipalities and associations, the means mobilized by this organization have boosted the dynamic of civil society. These efforts are supported by communication campaigns, including travel agencies and tourism promoters. Thus, this was geared towards ensuring a niche for these products in a very competitive market, to emerge the unique and natural image of Argan, almost mythical, of which only Berber women (Amazigh) hold the product secret.

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<sup>14</sup> The ANDZOA also gives grants to encourage arganiculture, that is to say as planting Argan fruit tree farms in private. An experience representing an area of 80 ha is already in place. It is currently subsidizing (February 2020) the reforestation of an area of 200 ha in the province of Chtouka-Aït Baha in the Souss plain.

This singularity deserves a protection label, that of an Appellation of Origin (AO) or a Geographical Indication (GI). The GI labeling of Argan oil is an important step in the enhancement of the Argan grove ecosystem because the quality linked to the origin is a strong lever for sustainable development in fragile and marginal agricultural areas. The GI label, in this case, has dual objectives: 1) to help the conservation of biodiversity and 2) to fight against poverty. The main aspects of the GI labeling and its legitimacy for Argan oil are as follows:

- The GI applied to Argan oil concerns as well the economic aspects (improving revenues and gaining new assets under the label of guaranteed quality), as the environmental aspects (preservation of resources) and the socio-cultural aspects (preservation of local culture, know-how, collective / participative management);
- IG strengthens the link between the product and its production environment;
- The GI guarantees a better price for the producer while ensuring the consumer the product's quality characteristics (Romagny & Guyon, 2009).

To meet the challenges of the IGP benefits, women cooperatives will be grouped in different associative networks; the most active of which are the National Association of Argan Cooperatives (ANCA) and the Moroccan Association of Argan oil Geographical Indications (AMIGHA).

The dynamics described above have prompted the Moroccan authorities to step up efforts and partnerships to sustain the socio-economic and environmental benefits. In addition to 10,000 hectares of new Argan plantations financed by the UN Green Fund, the Green Morocco Plan launched by the Ministry of Agriculture has financed by the Agricultural Development Fund the planting of 20,000 hectares of private Argan farms (arganiculture). The projections of the Green Generation Plan launched by the King relate to the plantation of 400,000 hectares, an increase in the area of the Argan forest by 50%. The efforts of the Moroccan government and all involved parties in the valorization of this forest and fruit tree resulted in the designation by the UN on May 10<sup>th</sup> as World Argan Day. This new designation is an international recognition of the Moroccan expertise in the management and

enhancement of this multidimensional heritage to perpetuate the role of the Argan forest in sustainable development.

### **3. Women's cooperatives: the gender approach at the heart of the Argan sector**

Several types of production structures characterize the Argan oil sector: (a) family units which produce Argan oil according to rational processes, (b) private operators who are trying to modernize the means of production, (c) foreign investors who use modern technology, and (d) women's cooperatives. This latter is of paramount importance thanks to its participatory approach is linked to gender and the socio-economic dynamics that they succeed in establishing.

Since 1996, in order to save their traditional activities around Argan and to maintain the socio-economic development of rural regions, women have gathered themselves in cooperatives. The purpose of these cooperatives was to ensure the socio-economic promotion of the rural areas of the Argan grove, and they now provide regular income to over 4,500 women. Some cooperatives also have a civic vocation to become spaces for women enhancement in rural society since the extraction of Argan oil is a process in which they have ancestral know-how. In order to be supported in their sales efforts, a number of cooperatives have also been grouped in network.

While Man has become the vehicle and the target of development, development experts, indeed, seek to involve this actor in the debate and the resources development. The Argan grove Biosphere Reserve is an ideal space for carrying out this participatory approach. Without the cooperation of associations, the projects concocted in and for the Argan grove will not be viable. In each village, the associations take in charge the sector under the guise of different titles, such as the protection of the Argan tree, culture and development, sustainable development, among others. All associations are, however, organized in a network, such as The Argan grove Biosphere Reserve Association Network (RARBA), in order to coordinate their actions. This federation allows experts and managers to collectively ponder on problems, potentials, opportunities and expectations of people without discarding the more local issues. In other words, as the famous motto states it, "*Think globally, but to act locally*". This approach can be described as "*cooperative entrepreneurship* ", whose function is to control the sector by diversifying the

products and sub-sectors, such as cooking oil, cosmetics, welfare and other products strongly associated with Argan oil, such as *amlou*<sup>15</sup> and honey from the Argan grove. The control and diversification of Argan oil production and its quality' s improvement permitted cooperatives to access export markets, and paying more than the national market<sup>16</sup>.



**Fig. 3. The manual extraction, by the women a cooperative, of Argan almonds is an essential operation in the process of extracting the oil.**

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<sup>15</sup> *Amlou* is "the sweet delight" representing the synthesis of Argan grove products: it is a toast made of Argan oil, almonds, honey. It is very high in calories.

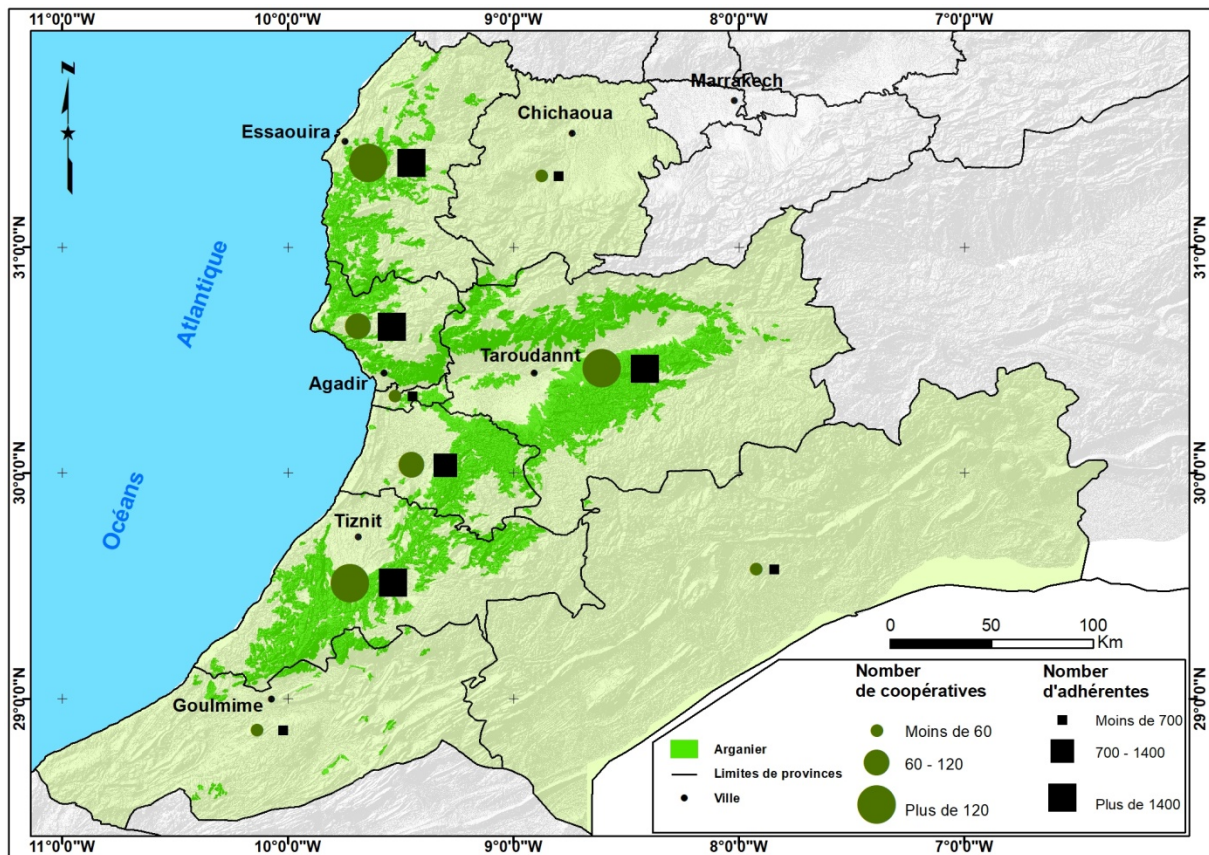
<sup>16</sup> The price of Argan food oil varies between 200 Moroccan Dirham in the local market and 40 to 80 euros in European markets and the price of cosmetic oil varies between 700 Moroccan Dirhams and 160 euros.



**Fig. 4. The mechanization of operation for the extraction of Argan oil and its related products**

In general, the women's cooperatives of the Argan grove have made it possible to enhance their work in the two fields of production and marketing. Thanks to these cooperatives, the shelves of stores abroad are well supplied with Argan products sold under the organic label. Bottling and packaging are the assets for the success of this product. While the price of a liter of Argan oil, extracted according to the traditional method, varies between 50 Moroccan Dirhams and 80 Moroccan Dirhams, the real one oscillates between 200 and 350 Moroccan Dirhams. This marketing capacity gives woman who are members of the cooperative an income that can reach 5 000 Moroccan Dirhams per year. This epitomizes a significant income in the region.





Source : ANDZOA, 2021.

**Fig. 5. Distribution of women's cooperatives of Argan**

This dynamic around Argan allowed a range number of women in the region to break free of male guardianship, through acting and making free and autonomous decisions. In addition, during the various workshops organized by cooperatives or associations, women constantly discover ways of living, such as conversing, taking part and endeavor, and access to social sites (public administrations, banks, city, markets, shops) which enhances their empowerment. If this only concerns a minority of women in the Argan grove, this dynamic allows women status to be the subject of debate and discussion, and thus engenders a shift in the relationships between men/women and city/countryside.

#### 4. The potential of eco-cultural tourism

As aforementioned, the Argan grove owes not only its reputation to the single Argan tree but also to an array of agro-cultural practices as well as to buildings

stemming from a history, several thousand years old, within this environment and the communities that embraced and shaped it. These buildings, located on underground cultures, tanks (*matfias*) for storing the household needs, collective apiaries of beekeeping and collective granaries (*igoudar*) for storing crops and other goods, are sui-generis in the world. This affluent heritage that forms the Argan Grove Reserve borders two major tourist destinations in Morocco, Agadir and Essaouira. These two seaside resorts are still over-packed by mass tourism and *All Inclusive* travels of Tour Operators; however, tourist activities are still restricted to the coast and the beach. While it is true that Argan products are the most sought in urban shops, few tourists want to know where these products come from and how they are made. Aware of this issue, the decision-makers and the tourism actors try to put in tourism this space with strong ecotourism potential to attract customers in search of wild nature (exoticism) and authentic or indigenous culture.

One of e s first steps in this direction consisted in the creation of two Country of Tourist Reception (PAT), that of the Ida-ou-Tanane and of Chtouka-Aït Baha (El Fasskaoui, 2009). The purpose of this breakdown is to allow a punctual development of rural areas through tourism by proposing a certain number of themes such as hiking, horse riding, mule and mountain biking, in order to enhance sites with high ecotourism potential. It also involves setting up an entertainment and leisure offer (such as regional and local festivals) and developing a housing offer. If the PAT of Ida-ou-Tanane labeled "*honey route*" knows a certain dynamic because, among other factors, of its proximity with the seaside resort of Agadir, that Chtouka-Aït Bha is struggling to start because of its transit situation and low stakeholder involvement.

Aboutayed (2014a, p. 110) counted 136 rural tourism accommodation units in the Arganeraie with some 3,000 beds. Compared to the 30,000 or so beds in the coastal town of Agadir the quantitative volume is still modest, so the aforementioned primary and secondary indirect effects of the revenues created by tourism cannot yet be expected to show any significant influence.

The tourism development of the Argan grove must however learn to reconcile the aspirations of local people, the interests of tourism promoters and reflected development programs and appropriate infrastructures to the fragility and diversity of ecosystems; this is for example the case of the road infrastructure for opening up and

consequently the discovery of several ecological and cultural sites. The development of homestays or solidarity tourism cooperation should be a means of raising awareness of the "Argan tree civilization", as well as access to the Argan grove products at competitive prices. By increasing the income of certain households, this rural tourism could curb the rural exodus which jeopardizes the control of the Argan tree biotope.

### **Conclusion: the risks of the globalized economy**

Argan oil is a Moroccan local product that has created a natural and cultural myth around it. Prized both by chefs and the cosmetics laboratories, it has a sector that enjoys a global scientific and economic interest. The socio-economic dynamics created at the regional level have benefited women's cooperatives, helping to change the lives of rural women and improve their living conditions, without however affecting most of the population. The Argan sector has yet to lay the foundations for a solidarity economy because the risk of misuse of the objectives of policies and initiatives for human and sustainable development remains threatening.

If the participatory approach linked to gender is indeed well perceived by the actors and the local communities, this ethical approach was also the pretext for the emergence of cooperatives which instrumentalize women for the benefit of commercial folk-heritage or divert income cultivation of Argan by exporting the raw product. This commercial aspect is crucial because *"by using Argan oil, consumers think they are helping the development of Berber women in southern Morocco and protecting nature, thus contributing to what is generally perceived as sustainable development"* (Simenel. et al 2009, p. 54). The export of raw Argan products may cause a long-term break links between the product and its territory and contribute to defraud, symbolically and economically, the rural communities and their ecosystem. The protection and development of the Argan grove must, therefore, be the subject of a consensus of all the institutional players in the region with a view to equitable and sustainable social and environmental development.

The forms of interaction between the Argan tree and the local communities, the artifacts and the cultural products of the Argan tree which result from it , result in a beautiful story between man and nature. Hence the advocacy of some researchers for the inclusion of the Argan grove on the UNESCO World heritage list under

landscapes cultures and list World Intangible Cultural heritage (Popp. et al, 2011). Due to the diversity of agricultural products from the Argan grove, it may also be necessary to consider COAs, GOAs or PGIs for other forest products (honey, *amlou*, cacti and its derivatives<sup>17</sup>). To this end, a traceability policy should be put in place to protect argan oil and its derivatives against fraud, the negative effects of which are beginning to harm the sector.

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<sup>17</sup> The prickly pear is a local product from the Argan grove which is beginning to establish itself as a sector. This product is also the subject of several cooperatives which produce several fig derivatives (food as jam and several cosmetic oils).

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