A Rapid Assessment of Cultural Conservation Practices in the Mediterranean/

By the Mediterranean Consortium for Nature and Culture / October 2013
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“I am a free man, in a free country…”
(Transhumant herder, Spain)

Ordinary people all over the Mediterranean Basin are the keepers of extraordinary ecological knowledge. Understanding and supporting this knowledge and the practices that are based on it is absolutely critical at a time when biodiversity and cultural diversity have never been more threatened.

In a bid to do this, the Mediterranean Consortium for Nature and Culture was established. A consortium of NGOs (Associacion Trashumancia y Naturaleza, DiversEarth, Doga Dernegi, Mediterranean Institute for Nature and Anthropos (Med-INA), Society for Protection of Nature in the Lebanon (SPNL), and WWF, with technical support from IUCN and FFI and financial support of the MAVA Foundation), have joined forces to undertake, as a first step, a project to assess and support ‘cultural conservation practices’ in the Mediterranean Basin. Through the project we aim to reinforce traditional practices, techniques and ways of living harmoniously with nature as well as celebrating the ingenuity of people all across the Mediterranean to protect and manage their lands, waters and resources. We hope that this initial project will contribute to a real revival of such practices so that they remain - or become - robust enough to stand their ground in the 21st century.

We have now carried out an assessment to quickly establish the types of activities and lifestyles informed by culture that exist today, which in one way or another contribute to conservation goals. The results are fascinating and are summarised in this document.

Some of the practices considered, for example transhumance and traditional / nomadic pastoralism, occur across the entire region in one form or another, lending themselves to cross-regional learning and support. Others are quite unique and place-specific (e.g. Guettayas in Garh el Milh, Tunisia). Some continue to have the fierce support of the communities practising them (e.g. traditional and spiritually-based forest management of Alewite communities in Turkey); others are struggling to maintain the interest of their youth (e.g. traditional fishing techniques, Kerkennah Island, Tunisia). Some have clearly stood the test of time (e.g. sacred groves of north western Greece); while others still are ancient practices currently being revived (e.g. Hima, Middle East). All of the practices explored here represent an outstanding wealth of traditional ecological knowledge which has until now gone largely unacknowledged by the conservation community - yet which surely holds the key to a more sustainable future in the Mediterranean.
The overview of these practices has brought to light many things. Heartening is the fact that people all over the region are still connected to nature in a very real and meaningful way. But it is simultaneously disappointing to know of the peoples and cultures fighting to keep that very connection alive in the face of seemingly insurmountable obstacles. What is clear is that many communities need concrete and practical support, or at least the recognition they deserve for their contribution to biodiversity protection and sustainable resource use. We trust that our work now and in the future will go some way to supporting them.
At the request of The MAVA Foundation in 2012 a number of regional and international organisations came together to start a process of thinking through the many inextricable links between culture and nature in the Mediterranean region. Alongside the conclusion that there is a wealth of pertinent work to be done in this field, was the decision to assess the current state of play of cultural practices that contribute to the conservation of biodiversity and the sustainable use of natural resources. For the first six months of collaboration the Mediterranean Consortium undertook a rapid assessment of cultural practices in the following countries: Spain, Portugal, Morocco, Tunisia, Turkey, Greece and the Balkans, Lebanon, Jordan and Syria. Although a number of Mediterranean countries have not been included thus far, this assessment paints a picture that we believe is indicative of the whole Basin. This document presents the findings of our initial study.

In 2013 the socio-economic and political situation in the Mediterranean cannot go without mention. It is currently highly complex and unstable. Almost every country included in the assessment is going through a period of radical change and unrest resulting in an extremely volatile living and working environment for the people, and Consortium partners, of each of the sub-regions.

While some of the Consortium partners are involved in more traditional nature conservation methods, it is acknowledged that ‘alternative’ and other effective ways to conserve biodiversity and natural resources must urgently be explored. Sometimes traditional nature conservation efforts can feel superficial and superimposed, with communities often disconnected from their lands and waters as a result. This project takes an entirely different entry point by looking at practices that are still embedded in communities and their value systems and which contribute to the protection, maintenance and enhancement of biodiversity and sustainable resource use... Cultural practices that have a real, positive and lasting impact on the environment.

In joining forces, the Mediterranean Consortium aims to contribute to the exploration of robust alternative solutions and methods of approaching biodiversity conservation. We recognise, as does the conservation community at large, that there is an urgent need to help people reconnect with their lands and waters. We also recognise the inherent beauty of cultural diversity and the practices that emerge from it.
The Rapid Assessment outlined in this document has highlighted the undeniable fact that human cultural diversity is not separate from biodiversity, as recognized by UNEP (2007), but indeed part of it.

Through this project and future work we will provide support and recognition to the people of the Mediterranean who are still connected with nature, who have and continuously develop traditional ecological knowledge (the key to a sustainable future), and who are struggling to find their place in a rapidly homogenizing modern society.

/ EMERGING ISSUES /

Many interesting issues and dilemmas have emerged from this initial work. A few of these are discussed below:

/ CAN A LOST CULTURAL PRACTICE BE REVIVED? /

Many issues surround the idea of reviving lost cultural practices:

- Who can decide to revive a practice? Can it be someone other than the practitioners?
- Why did it disappear in the first place?
- Is the practice pertinent / possible today?
- How do you ensure that it becomes properly embedded again in a community?
- What about ownership and integrity?
- How do you get wider support for it?
- Is revival understood to mean a return of the practice to every day life or can it be revived as a form of conservation?

The list of questions is endless.

Two of the major cultural practices considered in this study are Transhumance in Spain and Hima (community conserved areas) in the Middle East – both of these are practices that have been / are still being revived. Over 25 years of hard work by Jesús Garzon and his organisation Trashumancia y Naturaleza (Consortium member for the Iberian Peninsula) to revive the long transhumance in Spain and Portugal has proved, without doubt, that lost practices can indeed be brought back with integrity. The revival of Hima in the Middle East is at an earlier stage of revival, but the interest that has been developed in the region for this concept is strong. It will be extremely interesting to see the extent to which it can be moved from a concept to a real and meaningful part of community life. SPNL (Consortium member for Lebanon, Jordan and Syria) has taken as their main mission the support for Hima recovery in the region.
One of the most interesting issues that has emerged from this work is the recognition that the practices people have most attachment to – and are therefore most sustainable - are not necessarily those that provide economic benefit (although this, of course, is one important element among many). They are instead practices that involve a deeper dimension of involvement: practices that inspire ‘freedom’ for the practitioner; practices that are devotional or spiritual in nature; practices that are actually lifestyles; or practices that are so unique and passed from one generation to the next with pride.

Very much linked to the above, are the characteristics of authenticity and integrity. Jean-Paul Sartre, the existentialist philosopher, believed that jazz was a real expression of authenticity – an expression of the self. Likewise, the authentic cultural practice is a practice that truly expresses the ideas and values (at least partially) of a culture or a community. Only when it has that fierce integrity does it have a chance of being somehow sustainable.

In this assessment we touched also on practices that were more than simple activities. The nomadic pastoralists of Turkey are one such case in point. Here we are talking of lifestyles, of ethnic minorities, of cultural heritage and of human rights. It also raises the question of threatened human cultural diversity and how, as a conservation community, we can help address these threats, particularly as conservation has often been the source of threat.

It was also made very clear during this exercise that these cultural practices are often interrelated and dependent on one another. For example, in Spain and Portugal, Trashumancia y Naturaleza decided to consider all of the different types of cultural practices occurring on one transhumant route: la vía de la Plata. This practice relates to many others (production of food, craftsmanship of animal bells etc.) and in many ways cannot be separated. Likewise in Tunisia it was noted that in almost all of the practices considered, the Marabout played a pivotal role.
“Culture should be regarded as the set of
distinctive spiritual, material, intellectual and
emotional features of society or a social group,
and that it encompasses, in addition to art and
literature, lifestyles, ways of living together, value
systems, traditions and beliefs.”
(UNESCO, 2002)

“Biodiversity also incorporates human cultural
diversity, which can be affected by the same
drivers as biodiversity, and which has impacts
on the diversity of genes, other species and
ecosystems.” (UNEP, 2007)

Taking the broadest definition of culture,
everything that people do is cultural in one
way or another. So how do we decide what is
a cultural practice? Some simple criteria were
defined for choosing the practices:

1. / DISTINCT CULTURAL PRACTICE /

Is the practice evidently based on cultural
values and value systems that can be identified
and that differentiate it from other practices in
the same area or region?

2. / AUTHENTICITY / INTEGRITY /

Is the practice an authentic endeavour
embedded in a community?

3. / BIODIVERSITY /

Does the practice occur in areas of high
biodiversity value?

4. / IMPACT /

- Does the practice contribute, directly or
indirectly, to the conservation of biodiversity
and/or the sustainable use of natural resources?
- Does the practice contribute to the Traditional
Ecological Knowledge of a place or region?

5. / SUSTAINABILITY /

Does the practice have longevity and therefore
has it been sustainable to date? What is the
likelihood of its existence in the future?

6. / ADDED VALUE /

What can we practically do, as an
interdisciplinary team, to support this practice?
Across the board, some main categories of practices emerged:

A. Transhumance, nomadic and semi-nomadic pastoralism, traditional grazing

B. Agro-pastoral systems based on local knowledge (linked with agro-biodiversity) and community land/water management systems

C. Sacred sites, holy places, sacred species, and the nature/religion linkage

D. Traditional forestry and forest protection

E. Dry stone walls, architecture and other bio-climatic construction techniques (including terracing)

F. Traditional (and unique) fishing techniques

G. Traditional hunting

H. Water management systems

I. Rituals, festivals, folklore

J. Traditional harvesting of food, medicinal plants and natural resources for other purposes

K. Salinas
Each of the sub-regional partners collected their information in the manner most appropriate to their context. Most began with a desk study, drawing also from previous work and experience in their countries. This was followed by outreach to other partners from their region, and finally some field research on the main practices identified. The following are the key questions and fields of inquiry used:

/ FIELDS OF INQUIRY /

For each identified ‘cultural conservation practice’ the following information was collected:

1. Name of the cultural practice
   In local language with rough English translation. How do people refer to it?

2. Description of the practice

3. Cultural values and value systems
   What are the cultural values that underpin the practice? Are there identifiable value systems that can be identified? What does this practice mean to people? What values does the practice have for the practitioners and their broader communities?

4. Conservation impact
   What is the conservation impact of this practice? Impact on species, on habitats, and on natural resources?

5. Where is it practised?
   Is it widespread or localised? Does it take place in several countries?

6. Since when has it been practised?
   Estimate how long the practice has existed.

7. Who does it?
   Identify groups of practitioners (think of gender, age, ethnic minorities, etc.); Identify institutions and other key stakeholders involved in the support of the practice.

8. How sustainable is it? (is it growing? Is it under threat, etc.)
   What are peoples’ perceptions in terms of sustainability? How do young people view and engage in the practice?

9. Main threats and key opportunities
   What are the main threats to the practice? How do people perceive these threats? Are the threats coming from within the community or from outside it? What are the opportunities to add value / enhance the practice?
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<td>Greece and Albania Pastoralism and Transhumance</td>
<td>The practice of traditional pastoralism is deeply embedded in the life-ways of many Balkan peoples (such as the communities of Vlachs and Sarakatsans in the case study of Pindos), constituting an outward expression of their cultural identity and continuity through several centuries. Cultural encounters between the various groups that meet along the transhumance trails have supported mutual exchange of ideas, habits, songs and fairytales, fostering new collaborations, marriages and trade.</td>
<td>Very important conservation impact. Transhumance trails and grazing areas support a great variety of habitats, suitable for plants, small mammals, reptiles and insects (i.e. thyme and bees), while they also contribute to forest management and fire control. Moving sheep supplies vultures, wolves and other carnivores with an important source of food. Finally, the continuous movement of flocks allows for a more economic use of water resources and contributes to the formation of unique landscapes.</td>
<td>It is practised all over the Balkans. Case study reported from Pindos mountain range (northern Greece and Albania). Transhumance has survived as a widespread practice throughout the Mediterranean and temperate zone of southern Europe from the Neolithic era until today. Herders from different communities across the Peninsula carry out this practice. Younger generations have gradually abandoned the practice.</td>
<td>Transhumance has long been an important socio-economic activity that has immensely contributed to cultural development of distinct groups of people as well as to the protection and continuous support of ecological habitats. Its sustainability in the modern context, however, remains to be proved, since strict EU specifications for secondary products as well as the nationalisation of pastures, forests and natural resources by former Balkan governments have alienated the nomadic pastoralists of their traditional and age-old rights.</td>
<td>Threats: continuous abandonment of the activity by local communities; lack of government interventions to restore the practice. Opportunities: locally based institutions manage to revive the practice in parts of the Peninsula; EU funded cross-border cooperation programmes are being used to support such initiatives along historic transhumance routes.</td>
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<td>Lebanon Traditional grazing</td>
<td>Grazing livestock in different areas of the country according to the availability of pasture and water. Some still practice this sustainably with appropriate rotation and movement, while others are more sedentary and have negative effects on the environment.</td>
<td>If grazing is practiced sustainably, it maintains habitats for threatened species, reduces forest fires, controls invasive plant species, and determines the landscape character of an area.</td>
<td>It is practised in most rural areas for example: Lebanon: Fekha and Kfar Zabad Jordan: Al Ghor mainly Syria: Mahassa Islamic, Jewish, and Christian prophets in the region were all shepherds It is an old activity practised mainly by shepherds for dairy and meat production.</td>
<td>Sustainable grazing is currently being supported by SPNL and other NGOs in the region towards allowing plants to regenerate, using grazing routes for eco-tourism, and for creating livelihood opportunities for communities.</td>
<td>Threats on the environment: overgrazing and overstocking. Threats on grazing: People look for the wider varieties of meat and dairy products at the market assuming they are cleaner and more sterile.</td>
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<tr>
<td>Lebanon Traditional grazing</td>
<td>Grazing products are made for traditional dairy food and the wool is used for handmade carpets and pillows.</td>
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Transhumance relies on the relations between humans, herds and territories. This practice has withstood various social changes and this thanks to its many economic, ecological and also cultural assets. The shepherd / pastoralist has accumulated and passed on knowledge and know-how. A humanisation of pastoral landscapes; an attraction for the lifestyle of the shepherds, close to nature - amateurs of green / alternative tourism offer new incomes to populations where transhumant pastoralism still remains.

Transhumance plays a key role in creating and maintaining outstanding pastoral landscapes. As a sustainable activity, it is characterized by the integrated complementarity of animal and plant production. Livestock provides fertilization and seed diffusion along the ways. Vertical complementarity refers to the use of grazing areas belonging to different bioclimatic zones. The practice ensures the durability of resources.

Scientists underline all the particularly beneficial effects of this practice on vegetation and the conservation of local biodiversity by respectively offering two periods of biological rest to the two portions of its territory of displacement (plain and mountain).

Transhumance is practised in the northern slope of the western High Atlas. The tribes of Rheraya-Ourika, Messioua, and Seksawa practice a summer transhumance respectively towards the mountain pastures of Oukaïmeden, Yagour and Tichka. In the Southern slope of the Eastern High-Atlas, the tribes of Ait Sedrat, of Ait Imaghrane, Ait Mgoun, Ait Atta, Ait Dadès make a shuttle between Agdals of the mountains of Jbel Megoun in summer and the Saghro Mount in the South in spring. In the Central Atlas, the tribes of the confederation of Bni Guild move between the pastures of the plain, Azaghar, in winter, and the mountain pastures and clearings in summer.

The dating of rock carvings observed in the Anti-Atlas is the origin of this activity between 2,500 and 3,500 B.C. The mountains have served as a refuge for ‘bovidiens’ during the dry period between 2500 and 1200 B.C. These prints also suggest the existence of an agrarian society cohabiting closely with an older society based on pastoralism.

Transhumant shepherds carry out this practice.

Like elsewhere, this very ancient practice has stood the test of time. Transhumance has always played a part in the creation and the maintenance of remarkable landscapes and a network of ways which historically allowed the circulation of people, the animals and the goods, but also of cultures and religions.

In the past few decades, the natural resources in the Moroccan mountains have been undergoing rapid pressure, threatening the sustainability of resources. The decline of transhumance is caused by the weakening of traditional rules of management of collective land and deterioration of water points, leading to a concentration of animals, and thus the loss of pastoral potential routes of anarchic settlement cultures preceded by irrational land clearing. Overexploitation of wildlife and habitat destruction. The causes of this worrying situation are many; such as, the lack of information in a number of policy makers and stakeholders on aspects of biodiversity and the contribution of extensive farming and transhumance in conservation, the lack of land planing, the non-respect of rules and laws (customary), lack of strengthening traditional methods of land management or also the deterioration of collects water points in mountains areas.

The role of transhumance in the creation and maintenance of outstanding landscapes and a road network that has historically allowed the movement of people, animals and goods, cultures and religions, has been recognized by UNESCO (e.g. Causses and the Cevennes, France). Other countries, such as Spain and Morocco, whose culture of transhumance is old and still alive, could also obtain this recognition.
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<td>Turkey</td>
<td>Nomadic pastoralism</td>
<td>Nomadic pastoralism is the main cultural system shaping the way of life of Yörüks who regard nature as sacred and who have a deep understanding of the importance of the intact environment they live in. Yörüks are a human group that is truly integrated into the ecosystem they live in. Direct-nomadic pastoralism as a way of living for Sarıkeçililer is integrated into the overall ecosystem of their passing routes and as a human group, it has been part of the biodiversity of the land they are utilizing. Goat herding which is the main activity, has a direct impact on preventing forest fires. In areas prone to wild fires, goats are set to graze on dry scrub which removes combustible material and reduces the risk of fires. Goat droppings are also an effective fertilizer for the land, having been trampled by the goats, it breaks down quickly and becomes rich soil. In the Middle Taurus region, during the winter months they camp at: Mersin- Erdemli, Silifke, Gülmar, Aydinçık, Bozüyük coasts, during the summer months they camp at: Karaman, Konya - Seydişehir, Beşehir, Bozkır, Ahırlı, Akören plateaus (Tuztaş 2011) Although Sarıkeçili Yörüks describe themselves as descendants of Oghuz Turcoman who migrated to Anatolia in the 11th century, that they could be an older indigenous group living in Anatolia. Sarıkeçili Yörüks who are the nomadic pastoralists migrate within a zone in Mediterranean region. It is an ancient practice by an indigenous group who are decreasing in numbers. Pressure of the modernizing world. Systematic state intervention to settle the nomads and include them into the taxation system as well to the formal education system. Growing agricultural land means a decreasing grazing land. Drought/decreasing water resources affect their traditional way of living and the routes they take.</td>
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<td>Koçers, Kurdish nomadic pastoralism</td>
<td>Koçers are a community living a nomadic way of life in Southeast of Turkey and they are occupied with sheep herding and cattle rearing.</td>
<td>Unknown. The unique pastoral practices and nomadism of Koçers are maintained for many millennia in an area where the first domestication of sheep took place. The pastoral heritage of the Koçers and their cultural landscape management is observed to be part of the ecosystem created since the Neolithic of the region. The Köçer way of life as an integrated life style in harmony with the environmental cycle indicates a positive impact in terms of the conservation conditions of the habitat they live in. Despite the harsh conditions of the region due to the Kurdish war, the practice is still alive today. Kurdish pastoralism as a cultural heritage remains to be assesed. Large dam projects in the region and monoagriculture projects by state initiatives reduce the grazing land that can be utilized by Koçers.</td>
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<td>Spain and Portugal Transhumance</td>
<td>Spanish transhumance, although once lost, still is firmly embedded in, and based on, the living culture of the country.</td>
<td>Basic and critical for biodiversity preservation and regeneration of woodlands and pastures in the valleys and mountains, establishing ecological corridors along the cattle trails. Essential to ensure connectivity between the valleys and mountains, allowing adaptation to climate change.</td>
<td>It is practiced along all the ancient transhumance routes still existing in Spain and Portugal. It dates back 6000 years and is practiced by transhumant shepherds.</td>
<td>Sustainability of this revived practice is still to be proven, but all of the keys are in place to make it sustainable.</td>
<td>Threats: Abandonment of transhumance replaced by intensive cattle raising which destroys ecosystems worldwide.</td>
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<td>Lebanon Hima</td>
<td>Previously based on tribal values and then on Islamic principles and values.</td>
<td>Important and direct conservation impact on species and ecosystems because of protection measures - communities decide to protect an area for specific purposes, e.g. no hunting or grazing rules.</td>
<td>There are currently 8 Himas in Lebanon, for example: Lebanon: KfarZabad, Anjar, Al Fekha, Qoleileh, Mansouri, Andaket, Upper Akar, Ibel Al Saqi Jordan: Duleil, Hashimiyyeh, Bani Hashem, Halabat Syria: Akroum...</td>
<td>Sustainability is yet to be proved in Lebanon. It will be dependent on perceived community benefits in parallel with conservation. Threats: unstable political and security situation; migrant local communities; Opportunities: in Lebanon for example Himas present the best option for community conservation; with many opportunities for replication and expansion. Jordan &amp; Syria have realized the importance &amp; impact of reviving the Hima resulting in the establishment of new himas in both countries.</td>
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<td>Turkey Traditional Mountain Olive Farming</td>
<td>Community-based value system shaped around use of landscape.</td>
<td>Significant enhancement of the olive forest ecosystem by restricting access at certain periods of the year. Also, no anthropogenic intervention to the olive trees apart from minor budding and collection of the olives from the trees. This lack of human intervention protects the soil and wild habitat.</td>
<td>Seferihisar (Orhanlı, Ulamış, Beyler, Gödence villages), Gaziemir and Balcova provinces of the city of İzmir. Gathering and processing wild olives from the mountain olive trees is a method used since the ancient Greeks. Local village inhabitants of Aegean region.</td>
<td>Despite an awareness and entrepreneurial project at Orhanlı village at Seferihisar, İzmir to encourage the continuity of this practice, it is broadly under threat. Conventional agriculture, rapid urbanisation, tourism. Due to a lack of awareness of the input and importance of the practice for the environment, the socioeconomic and cultural sustainability of the area, the mountain olive land is rapidly being sold to non-locals who are generally not aware of the practice. Opportunities: Overall benefits of the practice could be advertised to locals to prevent selling of the olive land for rapid cash. Also production of olive oil could be encouraged for the same purposes. A good example of this is in Orhanlı village. The practice could be introduced to non-local landowners.</td>
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**Morocco**

**Agdal**

The Agdal is considered to be an indicator of a strong community cohesion and as potential protection against the precariousness of life, both in relation to the harsh climate and the uncertainty of employment and sources of income of the rural population.

There is a strong linkage between the use of Agdal and biodiversity goals. A tribe decides the best time for grazing, for a limited period - usually from March to July. This practice allows the regeneration of resources to ensure a good return on pasture during summer droughts. The practice of Agdal contributes directly and indirectly to the protection of plant and animal biodiversity since it allows flowering, the reconstitution of seed stocks and other species. The closure of the Agdal coincides with the breeding season for many species of invertebrates and vertebrates.

**Middle and High Atlas and southern Morocco: Agdal Isugan n-Waguns High Valley Ayt Mizane (Toubkal National Park); Agdal Yagour Valley of Ayt Bouguemmez, Plateau Oukaimeden; Imilchil Izlan, forest Agdal Ifrane top Azourki, High Atlas Toubkal National Park and eastern High Atlas; Agdal T’anzoult, part of the Ramsar complex Aguelmam Sidi Ali and Tifounassine at the limit of Ifrane National Park.**

It is an ancient cultural practice - thousands of years old.

Breeders and nomadic shepherds in the Atlas mountains.

Because of the undeniable environmental and socio-economic impacts of this practice, it has stood the test of time and is still a sustainable practice for the future.

In human terms, the development of individualism in the regions where the Agdal was practiced. New relationships that people have with their space brings with it some irresponsibility towards their cultural and natural heritage.

There are conflicts between the tribes on the rights of use and conflicts between farmers on the property of Agdal and the right to shelter construction.

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**Guettayas / Polders**

Guettayas are ancient farming techniques carried out on Sabkha (salt water). Farmers grow many types of crops (potato, onion, fruit) on brackish ground. The technique places a layer of sand that can hold water runoff from the mountain, thus solving the fresh water needs of plants.

This practice is a legacy of Traditional Ecological Knowledge handed down from generation to generation. Villagers are both fisherman and farmer. According to available knowledge it is a practice unique to North Africa.

These techniques protect the wetland and remove the threat of wetland conversion. Strengthens the link between humans and the wise use of the Ramsar protected wetland since 2007.

Sidi Ali el Mekki, Ghar el Melh. No data.

Local villagers carry out this practice.

Farmers of Ghar el Melh are able to grow for themselves and to sell.

This practice is threatened by the use of pesticides.

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**Country, Name of Practice and Description / Cultural Values and Systems / Conservation Impact / Where It Is Practised, Since When and By Whom / Sustainability, Threats and Opportunities /**
Terracing is an expression of a human landscape in steep and difficult conditions. Ancestral knowledge has tamed the mountain through effective means still pertinent today in fighting against soil erosion. Whole slopes from bottom to top are covered with terraces providing a wonderfully aesthetic landscape. These traditional practices are adapted to climatic conditions, and the topographic and socio-economic realities of communities.

No specialist ‘maâlem’ or craftsmen are needed to construct the retaining walls. The work of terrace building in the Moroccan mountains belongs to very poor peasants using archaic tools, still today. It protects the soil against erosion by improving its retention capacity of irrigation water. It is also excellent for biodiversity given that the terraces themselves create rich ecosystems teaming with life.

This practice is very widespread in the Anti Atlas, it is also practiced in the Rif and High Atlas and occasionally in the Middle Atlas.

In the catchment of the river in the province of Lakhdar Azilal, in Anti-Atlas, more precisely in the North-East of Mirleft close to the Atlantic Ocean, the faïd of the Arghene wadi on left bank of the wadi Under, Sebt Gzzula, Targa Touchka, Targa de Tanalt.

The causes of degradation of agricultural terraces are multiple. They are either physical (climate hostility and droughts, topographic, terrain etc.) or anthropogenic (a significant population decline in the area of the Anti Atlas and changes in people’s behaviour, rural exodus, a mechanization of a non-adapted agriculture, the extension of the urban habitat, etc.). During the 1990s a renewed interest in these traditional techniques was born. This interest has developed in the framework of research programmes carried out on the issue of soil erosion.
Tunisia
La Welja

The welja are lands located on the edge of the sea in the Sahel, especially in Sousse. These lands span upstream to 500m and include a downstream sandy soil and an upstream land 'Hamri’ (more balanced with enough organic material). These gardens produce everything: from fruit trees upstream to downstream vegetable growing. The ‘Nokr’ technique consists of digging a hole of 1,5 m in the sand for each seed. When water appears in the hole, the sand is mixed with manure that fills the rest of the evacuated sand until the levelling of the plots. The sea side welja are protected by mounds of sand (Tabia).

These welja are a symbol of local ownership and socio-cultural value.

There is direct linkage between this ingenious practice and the sustainable use of limited water resources and the exploitation of lands normally unfavourable for cultivation. Protection against erosion by natural dunes enhanced by planting. Uptake/abstraction of water resources before they are irretrievably lost at sea; Perfect mastery of underground water sources before they reach the sea. Ensures fertility and soil enrichment by fertilising it with manure.

In Tunisia: Chott Meriem in Sousse

The practice dates back to the Roman period but developed in the late 16th century.

The owners of these lands (the inhabitants of the Sahel) carry out this practice.

Food self-sufficiency accentuates the attachment of the owners to their weljas.

In Tunisia: Chott Meriem in Sousse

The practice dates back to the Roman period but developed in the late 16th century.

The owners of these lands (the inhabitants of the Sahel) carry out this practice.

Threats: This practice has almost disappeared since the 70s, although there are still a few plots in Chott Mariem in Sousse. Lack of initiatives to promote what remains of the land not yet affected by urbanisation. The disappearance of independence and self-sufficiency of the cities with the disappearance of weljas; excessive urban pressure; a growing lack of interest in coastal traditional agriculture.

Opportunities: food self-sufficiency during the summer.
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Spain and Portugal</td>
<td>Traditional knowledge of how to render steep land productive. Cultivation of fruit trees, such as almond, chestnut, walnut, fig and cherry on mountain slopes with stone terraces, for the production of foods, especially dry nuts, jam and honey.</td>
<td>Important biotope for numerous species of vertebrates and invertebrates. Essential cultural practice for the conservation of these biotopes.</td>
<td>In the mountainous regions of Spain and Portugal.</td>
<td>It is still practiced but on the decline</td>
<td>Threats: Abandonment and use of pesticides.</td>
</tr>
<tr>
<td>Use of Marshes</td>
<td>Based on local and traditional ecological knowledge. Survival of native breeds of livestock and crop varieties, adapted to local conditions, with a variety of management systems by the local population.</td>
<td>Important biodiversity reserves with numerous endangered species such as the Iberian Lynx and the Spanish imperial Eagle, and for the wintering birds from Northern Europe. Conservation by the local population of traditional practices that contribute to the conservation of biodiversity.</td>
<td>It is an Ancient practice carried out throughout the region by local villagers.</td>
<td>These are sustainable practices.</td>
<td>Threats: Destruction of the marshes due to intensive farming, pesticides, drying of wetlands, eucalyptus plantations and loss of traditional knowledge.</td>
</tr>
<tr>
<td>Olive tree farming</td>
<td>Traditional management of olive trees based on cultural values related to food.</td>
<td>Biotope for numerous species of invertebrates, nesting birds and reptiles, as well as a main wintering place for many millions of migratory birds.</td>
<td>It is an Ancient practice carried out throughout the region by local villagers.</td>
<td>These are sustainable practices.</td>
<td>Agricultural intensification, herbicides and pesticides and the elimination of older trees.</td>
</tr>
</tbody>
</table>

Olive trees for table olives and oil, of maximum gastronomic quality and beneficial for human health.
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<tr>
<td>Spain and Portugal</td>
<td>Maintenance of cereal steppes</td>
<td>Large and extensive crops of grain and legumes in mosaic.</td>
<td>Main world reserve of steppe birds, such as great and little Bustards, Montagu’s Harriers, sandgrouse, stone curlews, etc. Important wintering area also for millions of birds from Northern Europe, such as red kites, harriers, merlins, waterfowl, waders etc.</td>
<td>It is an Ancient practice carried out throughout the region by farmers.</td>
<td>It is still practiced but on the decline.</td>
</tr>
<tr>
<td>Vinyards</td>
<td>Cultivation for the production of table grapes and wines of high quality of local varieties adapted to local conditions.</td>
<td>Based on local cultural values - traditional maintenance of crops in mosaic and underground wineries of great cultural and ecological interest.</td>
<td>Biotopes for numerous species of vertebrates and invertebrates and to prevent erosion on grounds of stony soils.</td>
<td>It is an Ancient practice carried out throughout the region by local communities.</td>
<td>This is a sustainable practice.</td>
</tr>
<tr>
<td>Management of Hay meadows</td>
<td>Natural grasslands for livestock during the winter and production of hay and forage during the summer.</td>
<td>Based on traditional agricultural practices and values. Small plots separated with dry stone walls or hedgerows of hazel, hawthorns, blackthorns.</td>
<td>Great ecological interest for biodiversity generated by walls and hedges, stables and barns, as well as by fertilization of the grasslands by livestock manure.</td>
<td>It is an Ancient practice carried out throughout the region by farmers.</td>
<td>This is a sustainable practice.</td>
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<tr>
<td>Spain and Portugal</td>
<td>Based on pastoral culture.</td>
<td>Areas of great importance for the reproduction and feeding of numerous animal species, such as bear, wolf, eagle, vulture and also for the diversity of plants, which require intensive grazing during short periods of time in the summer.</td>
<td>It is practiced in the mountainous regions of Spain and Portugal.</td>
<td>It is sustainable but not without threat.</td>
<td>Loss of livestock, which leads to loss of diversity of pastures by bushes and heightens the risk of uncontrollable wildfires.</td>
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<tr>
<td>Management of Mountain Pastures</td>
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<tr>
<td>Mountain peaks, usually above the edge of the forest area for transhumant livestock during the summer. Land for communal use, by the residents of the mountain villages, governed by very old rules, ensuring their sustainable use.</td>
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<tr>
<td>Dehesas and Montados</td>
<td>Based on pastoral culture.</td>
<td>Traditional management by ranching and transhumance, pruning of trees for firewood, extraction of the cork, cereals and leguminous crops and harvesting of acorns by herds of Iberian pig. Ecosystems of high natural value, home to numerous species threatened from extinction, to wintering birds from the North of Europe, such as cranes, lapwings, wood-pigeons and millions of singing birds.</td>
<td>It is an Ancient practice carried out throughout the region by farmers.</td>
<td>It is sustainable but not without threat.</td>
<td>Agricultural and livestock intensification that destroys the extraordinary biological diversity of grasslands and minimises the regeneration of trees.</td>
</tr>
<tr>
<td>Dry pastures with scattered trees of selected stone oaks (with sweet acorns), cork oaks, pine, etc. for livestock, agricultural and forestry use.</td>
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### Greece

**Sacred groves as a means for forest protection**

Maintainance of mature groves through religious rules, which serve as protective wood belts above villages or form groups of veteran trees around churches, providing protection against natural hazards and helping regulate the use of natural resources.

**Cultural values and systems**

Sacred trees and groves have been associated with pre-Christian local taboos about cutting and supernatural punishments. Such beliefs were used during the Ottoman Occupation (1430-1913) by the Church as a means to support administrative decisions and apply justice in the absence of codified civil laws, succeeding to protect and conserve sacred trees and groves until recent times. However these taboos are now fading along with the older generation.

**Conservation impact**

Important impact on conservation of ancient forests and trees, with significant benefits for biodiversity conservation, sustainable use of natural resources and protection of settlements and buildings against natural hazards.

**Where it is practised, since when and by whom**

Case study reported from Epirus, NW Greece (University of Ioannina, SAGE programme)

Sacred trees and groves have been associated with pre-Christian beliefs, according to which mature trees are demonic creatures, or are inhabited, haunted or embodied by such creatures, and may damage those who try to harm them.

**Sustainability**

Although young people do not generally share the religious beliefs of former generations, they are more aware about ‘wildlife’ and ‘nature conservation’. This creates positive prospects for the future protection of sacred natural areas as places of spiritual, historical, ecologic, cultural and aesthetic value.

**Threats and opportunities**

Although young people do not generally share the religious beliefs of former generations, they are more aware about ‘wildlife’ and ‘nature conservation’. This creates positive prospects for the future protection of sacred natural areas as places of spiritual, historical, ecologic, cultural and aesthetic value.

The destruction of rural life is a threat for such beliefs on nature to be forgotten by urban population.

### Turkey

**Storks (Ciconia ciconi) as sacred animals**

According to Islamic belief storks are believed to be migrating over Mecca and Medina (holy land) therefore they are considered holy animals and they can not be hunted.

**Cultural values and systems**

The belief is an ancient Anatolian cultural belief based on Islam. The storks are called ‘haji stork’ due to them migrating through Mecca and Medina and becoming a haji during that trip. The children are told ‘the one who throws stone at a stork will get his/her arm broken’ to emphasize the holiness of the animal.

**Conservation impact**

The storks are protected from hunting all over Anatolia.

**Where it is practised, since when and by whom**

It is practiced in rural Anatolia.

The storks are protected from hunting all over Anatolia.

**Sustainability**

It is a strong belief based on religion therefore it is largely sustainable.

**Threats and opportunities**

The belief is strong based on religion therefore it is largely sustainable. Successful programmes and initiatives (as the SAGE programme) provide a new boost.

The destruction of rural life is a threat for such beliefs on nature to be forgotten by urban population.
**Based on an Islamic story based around the Urfa region:**

According to the story Prophet Abraham who was born in Urfa has been breast fed by a gazelle while his mother was hiding him in a mountain cave from the Pharaoh.

The Goitered gazelle (Gazella subgutturosa) is a species listed by the IUCN as ‘Vulnerable’. It lives in 20 countries stretching from the Arabian Peninsula to central Asia to the Middle East. It is one of the three last known populations of gazelles and the largest in Turkey, living in the Key Biodiversity Area of Urfa steppes. The reasons for the decrease of this species in Turkey are illegal hunting, the live catching of calves, agricultural expansion and pesticide use. The belief has a direct impact on hunting practices.

**Where it is practised, since when and by whom:**

Urfa steppes, Kızılkuyu Protected Wildlife Area of Urfa region.

No data.

Local community in Urfa carry out this practice.

The Islamic belief is strong however there is difficulty in passing it down to younger generations. The illegal hunting, the live catching of calves, agricultural expansion and pesticide use continues to be a threat to the species. Opportunities: Field surveys on the species permitted the reintroduction of the Goitered gazelle to the Kızılkuyu Protected Wildlife Area, regular monitoring provides information on future studies that should be carried out on the species. In addition, Doğa Derneği has implemented several communication activities in Şanlıurfa city centre and the villages near the Kızılkuyu Wildlife Reserve to promote the natural values of gazelles and steppe habitats.

This work was followed by training sessions held in village schools in collaboration with teachers. As a result of these activities, the number of gazelles has increased to more than 500 in a period of five years. Lately the community members organised a khutba (sermon delivered at the noon prayer on Fridays and on certain other occasions) to deliver and emphasize the importance of gazelle in Islamic belief which is an important and effective way of passing on the belief to the next generation.

**Sustainability, threats and opportunities:**

Crane migration routes and their stopovers cover majority of the Turkey. Crane routes effect 87.8% of the Key Biodiversity Areas of Turkey (Akarsu, F. ed. (2013)

The initial traces of the belief system is seen in Neolithic site of Göbekli Tepe located in Urfa dating to 10.000 BC. Also another important Neolithic site Çatalhöyük depicts evidence of rituals around cranes dating back to approximately 7500 BC. In the written 18th century Ottoman literature there are plenty of poems and songs written about crane.

The belief strongly embedded amongst different aspects of Anatolian life.

The culture shaped around the crane is under threat due to different socio economical and cultural factors. The rapid decline in the rural sites of Turkey and migration of the village population into urban sites are one of the main social aspects.

Also, the destruction of the wetlands (due to overgrazing, intensive agriculture, irrigation, drying wetlands to obtain agricultural land) are endangering the species on the national level which effects the culture as well.
<table>
<thead>
<tr>
<th>Turkey</th>
<th>Sacred animals in Tahtacı culture</th>
<th>Animals such as deer, goose, crane and bear are sacred animals in Tahtacı Alewite culture. They are not to be hunted or harmed.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Goose: Tahtacı Alewites believe that when Profit Ali was killed in a mosque, the geese in his garden sensed it and tried to stop him going out of the house. Killing or hunting geese is considered a sin. Goose feet is a wide spread symbol in Tahtacı culture. The goose feet as a symbol can be seen at grave stones of Tahtacı Alewites.</td>
<td>The religious belief considering the geese as a sacred animal provides a strong protection for the species.</td>
</tr>
<tr>
<td></td>
<td>Deer: Tahtacı Alewites believe that the deer is a type of angel; therefore to hunt the animal is a sin. They also believe that whoever kills a deer will be cursed.</td>
<td>It is practised in the Tahtacı villages in Çanakkale, Balıkesir, Denizli, Antalya, Mersin provinces of Turkey. Tahtacı Alewites are believed to have migrated to Anatolia in 11th century as one of the Torkoman Oghuz tribes. Tahtacı Alewites carry out this practice.</td>
</tr>
<tr>
<td></td>
<td>Bear: The bear is believed to be an animal that has the spirit of a human. Tahtacı Alewites believe that killing a bear is as much of a sin as killing a human being. The belief system in relation to the crane is mentioned above.</td>
<td>Due to the belief system strongly embedded in the religious culture of the Tahtacı Alewite ethnic group, it has a strong sustainability component.</td>
</tr>
</tbody>
</table>

Despite Tahtacı Alewite belief still practised widely in parts of Mediterranean, community members are migrating to urban centres in which dominant monoculture is assimilating nature based rural cultures.
Habous or le waqf
A legal act by which a person, in service of God, gives his property (generally buildings), for a charitable or social service. They are set up either as public habous or given to specific people (habous family) for management.

Morocco

Habous as a traditional means of environmental protection, emanating from religion has proved its efficiency in the protection of certain animal species and flora (the stork and the argan tree for example). This 'back to basics' approach is promoted by the International Islamic Educational, Scientific and Cultural Organization (ISESCO), which published a report in 2001 in which Chapter IV deals with the future prospects of habous in human development. There is a call to religious leaders to make habous an instrument for the protection of biodiversity. This initiative is growing in Morocco and will herald the 'rebirth' of environmental habous, supported by the legal framework.

The flexibility of Habous allows it to have endless environmental applications. It is possible to create a land in perpetuity for a variety of purposes such as the development of agro-pastoral research, the increase of wildlife and restoration, the creation of a village wood, the construction of basins, the digging of wells, construction of public gardens, etc. Habous have a high potential to contribute concretely to the protection of biodiversity. They will not replace protected areas, but may make them more effective. Their contribution is also cultural and political and the flexibility of its legal system is very interesting. Habous can help fill the gaps in the public services for environmental protection. At a time when biodiversity is poorly protected by the law, it would be appropriate to call on this institution whose mode of operation is both immutable and flexible. It has contributed since Almohades and Mérinides to the management of water resources, the urban planning and the protection of animal species. The cultural values of the Habous must be revalorised.

Several arguments are in favour of this extension: The perpetual nature of an institution that takes into account the interests of future generations; its historical role as a public service to promote a participatory approach; the experience as a tool for the protection and so forth all plead in favour of its re-mobilisation in the field of environmental protection.

Standard practice on all the national territory; In 1702, Sultan Moulay Smail, constituted the habous of the Bou-Regreg river and this by a Dahir which was confirmed in 1916. In the same way, habous focused on the protection of Storks. Maristane Sidi-Frej in Fès, for example, was known for the care he gave to wounded or sick storks. In Marrakech, Dar Bellarj was actually a habous established for the benefit of these birds. In this sense, Bellarj habous in Marrakech took advantage of income from buildings (ie hotels). These revenues were therefore reserved for the protection of storks.

Since the advent of Islam in Morocco

Several arguments are in favour of this extension: The perpetual nature of an institution that takes into account the interests of future generations; its historical role as a public service to promote a participatory approach; the experience as a tool for the protection and so forth all plead in favour of its re-mobilisation in the field of environmental protection.

Muslim citizens carry out this practice generating crop yields with a positive impact on people and livestock.

Opportunities: The flexibility of the habous allows them to have endless environmental applications. The habous may also consist in allocating revenues of real estate or financing of similar projects. It may also be advisable to bring the habous closer to the agdal whose patrimonial potential is still in force. It is also very important revive old habous. Available information on environmental habous (habous for birds etc.) is extremely incomplete, in particularly with regards to their legal status.

Several arguments are in favour of this extension: The perpetual nature of an institution that takes into account the interests of future generations; its historical role as a public service to promote a participatory approach; the experience as a tool for the protection and so forth all plead in favour of its re-mobilisation in the field of environmental protection.
El Baraka (good fortune) is sought. During their travels, the marabouts were transferring the blessing to the places through which they passed, such as forests, mountains, oasis, or the trees below which they rested. Also, there are forests that have only one marabout that holds symbolic power over the entire population, as the marabout ‘Sidi Ali El Mekki’ in Ghar El Melh, Bizerte. Some individual trees are considered sacred and they are able to provide therapy to people. For example the ‘Om echweleg’ tree in the governorate of El kef, which helps to reduce the fever of children as soon as the parents hang a piece of cloth on its branches.

Maraboutism is a pre-Islamic phenomenon. After Islam, they were based on the concept of Baraka. The marabouts that exist in ecosystems preserve biodiversity indirectly. They represent a form of symbolic and religious deterrence for the population. In the oasis, marabouts protect water sources from human risks (theft of water) and natural (drought, pollution ...) and monitor the sharing of water and its rational use. Likewise the forest marabouts ensure forest protection. In ecosystems where we observe many marabouts (such as the forest of El Aaiun in Gasserine where there are over 40 marabouts), are considered by researchers as a laboratory of rare species because of their sacredness. The Marabouts are very effective against the overexploitation of resources and the degradation of biodiversity.

The phenomenon of maraboutism related to ecosystems is found everywhere in Tunisia.

Maraboutism dates back to the pre-Islamic period. Each marabout has its servants called ‘sheikh’, ‘Mkaddem’ or ‘Mkadma’ that ensure its maintenance and receives visitors.

The minimal threats from human interference in these sites, provides the sustainability of these areas and the preservation of the relevant ecosystems.

Threats: Current extremism and destruction of mausoleums; Opportunities: Marabouts still have a very strong role to play in Tunisian society.

Tunisia

Marabouts

The marabouts are usually saints venerated by local communities, and their graves have become places of pilgrimage and centres of community life be it for religious, therapeutic or other social reasons. People regard them as expressions of their religious sentiment and consider them as intermediaries between them and God. It is at the Marabout that the divine power of El Baraka (good luck) is sought. During their travels, the marabouts were transferring the blessing to the places through which they passed, such as forests, mountains, oasis, or the trees below which they rested. Also, there are forests that have only one marabout that holds symbolic power over the entire population, as the marabout ‘Sidi Ali El Mekki’ in Ghar El Melh, Bizerte. Some individual trees are considered sacred and they are able to provide therapy to people. For example the ‘Om echweleg’ tree in the governorate of El kef, which helps to reduce the fever of children as soon as the parents hang a piece of cloth on its branches.

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Lebanon

Religious Beliefs and visits to religious sites

Site conservation by various religious authorities due to their religious values.

Such sites have great value in religion. As such their protection over the years has been observed as mandatory. Site visits by the public to fulfill their vows.

Important conservation impact on species and ecosystems because of protection measures that prohibit construction activities and other human interferences.

Lebanon: Qadisha Valley, Harissa Forest, Sayidit il Nouriyyi Monastry, Prophet Ayoub Memorial, Saint Charbel Memorial

Syria: Maqamat Bani Hashim, Jabal il Arbaeeen, Maaloula

Jordan: Mount Nebo, Hammamat Ma’in, Wadi Kharrar

Emerged in Lebanon, Syria, and Jordan since the foundation of the Christian and Islamic faith.

The sites are originally managed by the religious authorities

Pressures from touristic facilities that try to develop in these areas due to large number of visitors.
/ TRADITIONAL FORESTRY AND FOREST PROTECTION /
Tahtacı Alewites are a subgroup of Alewites in Anatolia - a religious minority group combining elements of Shi’ism with Sufism with some schools drawing influence from Tengrism and/or Zoroastrianism. Tahtacı Alewites are believed to be ethnically Turkmen and specialise in forestry. ‘Tahtacı’ literally means ‘woodcutter’. Their belief system is based on pantheism which interprets nature as the God himself therefore is sacred.

The management of forestry in the traditional sense by the indigenous forest people Tahtacı Alewites is part of the forest ecosystem. These human groups are integrated in the natural mechanism of the biodiversity in the forest. Tahtacı Alewites consider some of the trees, especially the old trees and some of the areas in the forest sacred therefore sacred places are due to be protected and the old sacred trees can not be cut according to the Tahtacı Alewite believe system. This approach has a direct impact on the biodiversity of the forest’s ecosystem. They have a vast knowledge of the habitat in the forest which leads to an effective resource management strategy.

Çanakkale, Balıkesir, Denizli, Antalya, Mersin provinces of Turkey.

They were believed to be descendants of Oghuz Turkomans who migrated to Anatolia in 11th century.

Tahtacı Alewites living by the forest areas of Aegean and Mediterranean region carry out this practice.

Today majority of the Tahtacı Alewites are not doing forestry due to socioeconomic reasons. Their traditional way of life, belief system, traditional knowledge about the forest is not well documented and is under threat of disappearing.

The traditional way of life is not well documented and rapidly disappearing. In the case of the Balıkesir Kaz Dağı where the majority of the indigenous group lives, the declaration of the national park is threatening the traditional way of living of the Tahtacı Alewites because it bans them to use the forest. Tahtacı Alewites living nearby and dependant on the forest/national park are excluded from management processes of the park.

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/ DRY STONE WALLS, ARCHITECTURE AND OTHER BIO-CLIMATIC CONSTRUCTION TECHNIQUES (INCLUDING TERRACING) /
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</thead>
<tbody>
<tr>
<td>Greece and Croatia</td>
<td>Dry stone and other environmentally friendly construction techniques.</td>
<td>Building with natural materials such as clay and thatches is the oldest construction technique, although it has always been supplementary to more solid materials, such as stone and wood (and eventually concrete).</td>
</tr>
<tr>
<td>Lebanon</td>
<td>Terraces</td>
<td>Old farming technique used in mountainous areas.</td>
</tr>
</tbody>
</table>

**Cultural Values and Systems**

- **Greece and Croatia**: Important impact on biodiversity conservation and sustainable natural resource management; dry stone constructions support many species of flora and fauna (invertebrates, insects, rodents, small birds), whereas building with natural materials reduces the footprint of the activity and produces recyclable constructions.
- **Lebanon**: Openings in dry stone terraces act as habitats for different bird and animal species.

**Conservation Impact**

- **Greece and Croatia**: It is practiced in all countries. Greece and Croatia are examples of recent revival efforts.
- **Lebanon**: It is practiced in mountainous areas for example: Aley and Hammena– Lebanon; Jordan: Wadi Mujib Nature Reserve; Syria: Near Qalat Al Hosn.

**Where it is Practised, Since When and by Whom**

- **Greece and Croatia**: Since the Roman Dynasty. Farmers use it for maintaining their agricultural lands on sloping areas. Farmers personally used to construct and maintain their walls and terraces. Restoration initiatives are now undertaken by organisations trying to revive the practice, such as Dragodid in Croatia. Building with clay and thatches is a less widespread activity that is gradually starting to grow through recent initiatives, such as the one by Piloiko in Crete.

**Sustainability**

- **Greece and Croatia**: Sustainability in the modern context is yet to be proved all over the area. Recent efforts create optimism, however these are neither widespread nor coordinated in and between the Balkan countries.

**Threats and Opportunities**

- **Greece and Croatia**: Threats: lack of interest by farmers due to high maintenance costs; lack of funding and support by central and local authorities; prevailing rural decline patterns (abandonment of agricultural lands, frequently followed by land use changes). Opportunities: initiatives by organisations and individuals gradually acquire wider status; landscape-related policies provide an impetus to the activity (as part of the strategy to conserve and enhance the cultural landscape) and attract the required funds.

- **Lebanon**: Replacement of the stone walls by concrete walls for the need of less maintenance procedure.
TRADITIONAL (AND UNIQUE) FISHING TECHNIQUES /
### Greece

**Traditional lagoon fishing (with permanent installations or boats)**

Mediterranean lagoons are important for fisheries and for extensive and intensive aquaculture and they contribute significantly to the fishery economies of many countries.

All the lagoons in northern Greece where fish stocks are exploited are managed by fishing cooperatives, the oldest of which still retain a traditional membership organisation that can be traced back to at least the Byzantine period (after 800 AD), where much of the exploitation of permanent fish catching installations, called 'epohes', was regulated by the central authorities. These collaborative, non-hierarchical, management structures secure social sustainability, by means of a fair and equal distribution of profits among all local fishermen, reducing conflicts among them and diminishing the need for middle-men.

Traditional fishing methods are based on harvesting local fisheries at a modest / sustainable rate, thus they do not contribute to the decline of fish populations over time and to the overall disruption of the ecosystem equilibrium.

Greece. Lagoon fishing in N-NE Greece is based exclusively on permanent fish entrapment devices combined with fish wintering channels. Fishing methods which do not use permanent trapping devices are widespread in W-NW Greece.

In Greece, the exploitation of fish stocks in coastal lagoons was the first type of applied aquaculture, and it has been practiced since antiquity.

Individual fishermen (in the case of boat fishing) and cooperatives (in the case of permanent fish trapping installations).

Fishing cooperatives have a continuous presence for centuries, maintaining their traditional management structures and their social / cultural significance up to now. Boat fishing techniques on the other side are largely vanishing today.

Threats: definite abandonment of traditional boat fishing techniques; effects of economic recession to the fishing cooperatives.

Opportunities: gradual revival of old practices in areas characterised by a high degree of sensitisation for environmental protection issues by the local population; increased interest for the fishing profession by young people who leave large cities; traditional boat construction for cultural tourism purposes.

### Tunisia

**Fishery system**

It is a traditional fixed fishing system that uses palm leaves in an arrow-shaped line. Fish are harvested selectively and appropriately.

A legacy of knowledge handed down from generation to generation. Charfiia is practiced exclusively in the Gulf of Gabes. It represents the identity of the site.

The use of natural materials (palm trees) is safe for ecosystem balance and the preservation of fish stocks.

It is practiced in the Gulf of Gabes, from Chebba to Zarzis, known as the 'Charfiia' in kerkeno-Sfax region and known as 'Zriba' in Djerba-Zarzis.

Since the Phoenician times. The seabed of Kerkenah Island is divided into parcels that are the legal property of local fishermen since the 17th century.

Local fishermen

Fishermen are attached to this practice, hence its durability. However even supporters of this traditional practice are turning to other types of fishing techniques to be economically viable.

The use of plastic rods to increase profitability.
Tunisia
Tuna Fishery: Matanza (La madrague)
A traditional net fishing technique for Tuna. Fish are encircled in a large trap and killed by spears and knives. In Sidi Daoud this technique is practiced for three months a year during the seasonal migration of Atlantic Tuna in the Mediterranean.

The fishermen are fifty to operate the fishery each season under the direction of Rais (captain). Fishermen open the fishing season by sacrificing a bull. The meat is distributed to all the villagers during a ceremony in the marabout of Sidi Daoud. This popular village culture is a way to approach God to bring luck to and protect fishermen from the evil eye.

A fishing technique that respects the marine environment: large nets, anchored or attached to stakes. It respects the fishing season from May to July.

It is practiced in Sidi Daoud (Tunisia) a small village known for its seasonal tuna fishery.

The captured tuna goes to ports for landings and distribution to the Japanese market. Surplus goes to a canning factory.

Current fishing techniques replacing the matanza are technical drift nets, trawling and breeding.

Octopus fishing in pottery or with stone
Fishermen cast into the water a long rope with 500 small clay pots strung together. Usually octopus hide in small crevices to watch their prey. They confuse the dark interior of the jug (or hollowed stone) with good hiding places. Fishermen hook them up in the jugs or stones.

Traditional ecological knowledge handed down from generation to generation.

The clay jugs have no negative impact on the seabed. A rational fishing technique that respects fishing seasons.

It is practiced in the Gulf of Gabes (Djerba, Kerkenah, Zarzis)

From Roman times

Local fishermen carry out this practice.

The only natural resource constant over the centuries. Eighty percent of octopus caught in Tunisia is from the Gulf of Gabes. No shortage is stated.

Other materials like concrete starting to be used instead of traditional materials.
<table>
<thead>
<tr>
<th>Country, Name of Practice and Description</th>
<th>Cultural Values and Systems</th>
<th>Conservation Impact</th>
<th>Where it is Practised, Since When and by Whom</th>
<th>Sustainability</th>
<th>Threats and Opportunities</th>
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</thead>
<tbody>
<tr>
<td>Tunisia</td>
<td>Traditional ecological knowledge handed down from generation to generation.</td>
<td>Fishing that respects the marine environment, practiced in accordance with fishing seasons.</td>
<td>It is practiced in the Gulf of Gabes (Djerba, Kerkenah, Zarzis). This old way of trapping persists in the village of Lataya on Kerkenah.</td>
<td>No data</td>
<td>Modernization of fishing techniques and their misuse (trawling that scrappes the seabed, driftnets, explosives ...), poaching, pollution, etc.</td>
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<td><strong>Fishing with ‘Demessa’</strong></td>
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<td>Local fishermen carry out this practice.</td>
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<td>This is a technique of ‘jumping fish fishing’ especially for mullet. The technique involves spreading 200m nets attached to floating reeds in a big circle. The fishermen make the fish jump out of the water by beating the surface.</td>
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<td>It contributes to the nutrition needs for the local population but also allows the sale of it in local markets.</td>
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<tr>
<td><strong>Fishing sea sponges with harpoons and mirrors</strong></td>
<td>The identity of the Mediterranean Basin.</td>
<td>It is practiced from November to March and stops when the sponges are reproducing. Other types of sponge fishing, e.g. the gangave has caused much damage to the marine environment but it has now been virtually abandoned everywhere.</td>
<td>It is practiced in the Gulf of Gabes (Djerba, Kerkenah, Zarzis)</td>
<td>Greeks were the first to catch the sponges of Kerkenah in antiquity.</td>
<td>Sponges have been used for thousands of years (from simple bathing to cleaning horses or luxury cars. They are also used in pottery, painting, glass and footwear industry).</td>
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<tr>
<td>Sponge fishing technique using the harpoon ‘Hadida’ with five barbed teeth. The Harpoon can reach a depth of 6 to 8 metres. Beyond this depth and up to 15-18 meters deep, Kerkenniens tie several poles together with rope. Another essential tool is the mirror ‘M’raya.’ It is a cylinder 50cm in height and 30cm in diameter, the bottom is a tight window.</td>
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<td>Local fishermen carry out this practice.</td>
<td>Currently, the technique is dying out.</td>
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<tr>
<td>Country/Name of Practice and Description</td>
<td>Cultural Values and Systems</td>
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<tr>
<td>Spain and Portugal</td>
<td>Traditional sea fisheries</td>
<td>Traditional fishing, both in deep and inshore waters, contributes to the conservation of fishery resources, but also prevents degradation. For example in July 1994, more than 350 fishing boats of Northern Spain blocked French ports and captured some vessels that used illegal drift nets, more than 10 km long, prohibited in Europe. Also during the winter of 2002-2003 the determined action of these sailors, creating barriers with their boats and their nets, avoided contamination of bays by the Prestige tanker oil spill.</td>
<td>It is practiced all round the coasts of Spain and Portugal. Since Phoenician times. Local fishermen</td>
<td>The practice is sustainable but it faces a number of threats.</td>
<td>Industrial Fishing by large ships and pollution of the seas.</td>
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<tr>
<td>River fishing</td>
<td>Iberian rivers, affected by the summer drought and with high floods in winter, have led to many traditional fishing techniques.</td>
<td>Protection of riverbank vegetation, construction of fisheries to ensure flow in summer, control of fishing periods and not destructive or contaminating fishing gear. Managing of natural resources, protecting them and creating green corridors along the riverbanks.</td>
<td>It is an Ancient practice carried out in Iberian rivers by local fishermen.</td>
<td>In itself a sustainable practice that often supplements other means of making a living.</td>
<td>Pollution of waters, construction of dams and large reservoirs, introduction of invasive alien species that threaten the extraordinary diversity of Iberian fish, with more than 41 endemic species.</td>
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<tr>
<td>Country</td>
<td>Name of Practice</td>
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<tr>
<td>Spain and Portugal</td>
<td>Shellfishing</td>
<td>Tidal fishing on the Atlantic coasts of the Peninsula, facilitate the gathering of molluscs: clams, cockles, oysters, mussels, razor clams and octopus.</td>
<td>Practice of major economic, cultural and social importance, especially for local families. The practice is done in accordance with the full and the new moon.</td>
<td>Conservation and valuing of intertidal ecosystems with high species richness. Defense by local fishers against industrial extractive activities and for conservation against coastal urban developments and introduction of exotic species.</td>
<td>It is practiced all round the coasts of Spain and Portugal.</td>
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<tr>
<td>Spain and Portugal</td>
<td>Aquaculture</td>
<td>Traditional practices for the production of fish and shellfish species for human consumption. Creation of lakes and ponds in rivers and coasts for fish, as well as for the cultivation of molluscs and fish in estuaries and bays.</td>
<td>Based on traditional knowledge of species and habitats, and part of the region's food culture.</td>
<td>Protection of numerous species and the quality of the waters, which could affect production, very high in some cases, as in the cultivation of mussels (more than 250,000 tons/year).</td>
<td>It is practiced all round the coasts of Spain and Portugal.</td>
</tr>
</tbody>
</table>
 Trap fishing is an ancient fishing technique in Anatolia that was practiced for centuries. The first written record talking about trap fishing has been by the famous Ottoman traveller Evliya Çelebi in 17th century. Today, only 18 trap fishing zones (dalyan) are left all around the coastal zone of Turkey. Industrial fishing techniques are taking over traditional methods. Despite the pressure of modernization, the technique is continued by fishers.

The method is trapping the fish of a certain size therefore the young fish and fish eggs are not destroyed. The method also allows a certain amount of fish to escape the nets and thus prevents overfishing.

İzmir Merkez (Homa Dalyanı), Aydın-Söke (Karine Dalyanı), Aydın Yenihisar (Akköy Dalyanı), Aydın-Söke (Sakızburnu Dalyanı), Muğla-Mılas (Güllük Dalyanı), Muğla-Köyceğiz (Köyceğiz Dalyanı), Antalya-Kaş (Gelemiş Dalyanı), Antalya-Kaş (Beymelek Dalyanı), İçel-Sıflık (Akgöl Paradeniz Dalyanı).

The first written record about the method is in 17th century but it has probably been practiced since ancient times. The Dalyancı community is a separate fishing community who only fish with this method.

Despite the pressure of modern techniques such as boat fishing on a large industrial scale the dalyancı continue with the method in the coastal villages of the Mediterranean as well as the Black Sea. One dalyancı fisherman states: ‘Trap fishing is left from our ancestors. This method is in peace with the sea and the fish. The nature has a great harmony, the fish migrate from lagoons to the sea exactly at the same time every year and we set up the traps at the same time every year. We hunt how much ever we need and it is not a greedy amount’

Due to the developing urban centers the amount of light and noise does not allow the fish to be migrating on shallow water and therefore the fish population needed for trap fishing on coastal zones is in rapid decline. Also the fishing techniques are getting modernised and boat fishing is taking over the fishing industry. Nevertheless, the trap fishing technique is recognised as an ecofriendly technique and promoted to be protected especially by the Traditional Fishing Organisation.
<table>
<thead>
<tr>
<th>Country</th>
<th>Name of Practice and Description</th>
<th>Cultural Values and Systems</th>
<th>Conservation Impact</th>
<th>Where it is Practised, Since When and by Whom</th>
<th>Sustainability</th>
<th>Threats and Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lebanon</td>
<td>Hunting</td>
<td>Chaotic situation of illegal shooting of birds and mammals. Two groups are evident now: professional hunters who abide by the law and nature conservation; and the shooters who disregard species, season, timing, places,...</td>
<td>Sustainable hunting gives the chance for birds to rebreed and other animal species to reproduce. Thus, conserving nature, and supporting ecological balance e.g. increasing quality of agricultural crops and decreasing production cost (decrease in use of pesticides and fertilizers).</td>
<td>Hunting is practiced in forests and woodlands, wetlands. Example Bekaa Valley of Lebanon Jordan Valley: Al Ghor and Ghadeer Burqu in the Eastern Desert which is a water body all year long. Syria: Al Jabboul Wetland</td>
<td>It is practiced in forests and woodlands, wetlands.</td>
<td>In Lebanon: Hunting has been banned since 1995. But the illegal shooting of wildlife birds and mammals is on the rise within the region especially by new generation. The new hunting law 580/2004 regulates the practice through a limit for game bird species, hunting license, tools and places.</td>
</tr>
<tr>
<td>Turkey</td>
<td>Partridge (Alectoris chukar) capturing</td>
<td>In Urfa region (Southeast Turkey) partidges are considered to be special animals therefore killing the animals are banned. Despite not having a religious foundation, the belief is strong amongst the villagers of Urfa region. They are captured and kept in the houses and the interest groups come together to see each others partidges.</td>
<td>In the areas where partridges live, no hunters are allowed. Also the villagers do not use any pesticides in these areas. They also leave grains in the fields for partridges to feed on.</td>
<td>Partridge (Alectoris chukar) capturing is practiced in rural areas of Urfa (Villages)</td>
<td>The cultural practice is pretty strong and sustained by a large group in Urfa.</td>
<td>The decrease of the rural sites in Urfa (migration due to economical and social factors. The region being a war zone etc.) has had a negative impact on the practice.</td>
</tr>
<tr>
<td>Country, Name of Practice and Description</td>
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<tr>
<td>Tunisia Falconry Hunting /falconry</td>
<td></td>
<td>It is a system of controlled and sustainable hunting. The local population of Haouaria protect their territory and especially the mountain because it is the place of this traditional hunting. Encourages pride of place.</td>
<td>El Haouaria is a Tunisian town situated at the northeastern tip of Cape Bon, at the entrance of the Gulf of Tunis. It is an important migration area for birds of prey. Around seven centuries. Local villagers; 150 breeders of hawk and falcon.</td>
<td>No data.</td>
<td>Threats on the environment: overgrazing and overstocking. The practice itself presents some threats to other bird species (if they are caught in the nets); Climate change.</td>
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</tbody>
</table>
/ TRADITIONAL WATER MANAGEMENT SYSTEMS /
<table>
<thead>
<tr>
<th>Country, Name of Practice and Description</th>
<th>Cultural Values and Systems</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Lebanon</td>
<td>Many villages still have these canals as their only way of water distribution (with traditional agreed approach for water management between stakeholders).</td>
<td>The water canals are open to serve nature. Flying birds and passing wildlife species drink from it. Example: ducks, fish, swamp cats, and soaring birds.</td>
<td>Between agricultural lands Example Anjar, Andket and al Fekha in Lebanon Jordan: King Abdallah Canals that runs parallel to the East Bank of the Jordan River. Syria: Shallalah Saghirah East Aleppo.</td>
<td>SPNL is working on the revival and conservation of the traditional water management systems, and rehabilitation of most of the water canals with the help of municipality.</td>
<td>Abandoning and destroying these canals for infrastructure purposes.</td>
</tr>
<tr>
<td>Tunisia</td>
<td>Historical water canals that have been used for the distribution of drinking and irrigation water.</td>
<td>It is practiced amongst the populations on the edge of the Sahara and the knowledge is held with these people.</td>
<td>Practised generally in Saharien areas. Tunisia: Feriena in the department of Kasserine; Ain El Kiss; El Guettar in Gafsa.</td>
<td>The presence of water in the oasis guarantees its social role, economic, ecological and also for agrotourism. The foggaras played a vital role in the development of the Sahara area and are a factor of social stability. The foggaras are an adaptation tool for the people living in extreme conditions.</td>
<td>Threats: Foggaras have disappeared due to lack of resources and funding. Rural exodus and migration of population to the cities. Opportunities: Development of desert areas. A judicial and technical system/A Legal and technical system is set up from the time the Foggaras are completed. Moral contract between the beneficiaries for water management and the maintenance.</td>
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<tr>
<td>Les Foggaras (or khrija)</td>
<td>Foggaras are underground drifts that drain water from the aquifer and convey them to the oasis. They are dug wells at regular intervals that connect the underground gallery at the free surface wells. These wells are indispensable for the excavation of the drifts and for their operation and maintenance. Downstream, the gallery leads to a pool located in the oasis and then connected to a network of canals then used to irrigate fields.</td>
<td>The water uptake and condensation is channeled without unnecessary dispersion of liquids in the ground or in the atmosphere, it limits evaporation. It ensures a constant supply rate of flow without any risk of drying up the water table. The flowing water is delivered without any expenditure of energy.</td>
<td>Foggaras were possibly the invention of Zenata Berbers before the 10th century. All beneficiary families without exception in general.</td>
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<tr>
<td><strong>Tunisia</strong></td>
<td><strong>La Meskat</strong></td>
<td><strong>This practice concerns the population of Sahel because of its relation to the olive groves.</strong></td>
<td><strong>The meskat helps to keep the water as long as possible near the roots of the olive-trees. Due to insufficient rainfall Meskats made the collection of runoff water possible to irrigate trees; They are important in the fight against erosion; they present a hydraulic balance in the exploitation of groundwater. The mounds (Tabia) of this development keep the water as long as possible at the root of the olive trees and promote infiltration; They are critically important for soil stability on steeply sloped areas.</strong></td>
<td><strong>Practised on the Tunisian coast (Sousse, Monastir, Mahdia).</strong></td>
<td><strong>Practiced since the Roman era.</strong></td>
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<tr>
<td>Country, Name of Practice</td>
<td>Cultural Values and Systems, and Conservation Impact</td>
<td>Where It Is Practised, Since When and By Whom</td>
<td>Sustainability, Threats and Opportunities</td>
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<tr>
<td>Tunisia</td>
<td>Viewed as a vital way to protect and manage rare water resources, the practice is sustainable.</td>
<td>South east of Tunisia. In Matmata, Gabes; Ben Yekhdech, Mednine.</td>
<td>Threats: The growing lack of interest of the local population; Neglect by the government; Immigration of young. Opportunities: in Ben Yekhdech, Medenine, there is an attempt to revive the practice.</td>
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<td>Jessieours</td>
<td>The knowledge is proper to populations of arid areas.</td>
<td>A pre-Roman technique</td>
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<td>The water gradually seeps into the ground and does not evaporate, forming a vital reserve to fight against drought. Jessieours represent a natural and culture heritage that contributes to the protection of a fragile desert environment. Populations of arid areas have developed this knowledge to survive and resist extreme climatic conditions and also to indirectly maintain their cultural identity.</td>
<td>The population of south-east Tunisia</td>
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<td>El Megel and El Faskia</td>
<td>Dates back to Roman civilizations and integrated into everyday life.</td>
<td>Throughout the country with a frequency in regions where there is a lack of water (Sahel Kerkennah, Jerba, Sfax ...).</td>
<td>Opportunities: Tanks have the potential to supply water for populations of dispersed urban environments; growing importance of this practice acknowledged by municipalities - grants are given to those who want to construct a Megel.</td>
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<td>Domestic, underground tanks in various forms for retaining and storing water runoff from roofs and collected in a catchment. There are two kinds of tanks: The 'faskiyas' and 'megels' which have the shape of a bottle or vase. The catchment area is either natural or integrated into houses (roofs, courtyards). The tanks are coated with hydraulic lime and covered with a vaulted or flat surface.</td>
<td>Direct impact on the quantity of available water.</td>
<td>Since the Roman civilization but developed further from the XVI century on during the Arab conquest.</td>
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<td>Previously, these tanks stocked water for domestic use, agricultural use for self-sufficiency and for watering animals.</td>
<td>The owners of houses in almost all regions of Tunisia.</td>
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<td>Threats: This traditional design is replaced in a few families by a modern pumping system.</td>
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<tr>
<td>Country, Name of Practice and Description</td>
<td>Cultural Values and Systems: the knowledge and values of the oasis community.</td>
<td>Conservation Impact: It ensures water quantity and quality. The maintenance of Khandag is the responsibility of the group of owners who use it. It is proportionate to the amount of water (Gadous) which is attributed to each one. Previously, the khandag also served to protect the oasis against incursions of the northern nomads: the Hmammas and Frachiches.</td>
<td>Where It Is Practised, Since When and By Whom: In the Djerid, in Tozeur and Nefzaoua, in Kebeli. Unknown. Oases communities carry out this practice.</td>
<td>Sustainability: These Khandags are essential for irrigation in the oasis since water is the most important factor for development and life of the oasis communities.</td>
<td>Threats and Opportunities: Threats: Lack of water resources.</td>
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<tr>
<td>Tunisia</td>
<td>Khandag</td>
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<td>The khandag are drainage systems which limit a property or divide it in two. They are composed of channels in the shape of a V, U or Y. They are either parallel with each other, or follow property boundaries. These ditches receive the drainage water and transmit it to other larger ditches and finally to the biggest ditches called ‘El Khandak El Kbir’. All of the ditches are called ‘Farch’.</td>
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### Morocco

#### Khettara

The Khettara is a system of water management in arid zones. This is achieved according to customary law developed by the population itself, and under the auspices of the Jmaa (tribe) headed by a chief (n Amghar targa or Amghar not ouamen) elected by the beneficiaries. The leader distributes water, watches over the maintenance work (cleaning of souaguis) and settles disputes between users. Therefore, this practice reflects a social consent for managing water scarcity while ensuring coexistence and peace between tribes.

An original system to collect underground water while minimising evaporative losses. The khettara does not present any risk of overexploitation, it regulates itself according to the natural recharge of the groundwater. Naturally, unless extended climatic events (in case of several years of drought), it provides water permanence for domestic and agricultural needs.

High Atlas, Haouz (Marrakech), Oasis (Errachidia, Tata) Souss. Khettara of Ferkla which belongs to J8 of the Reserve of Biosphere of the Oases of Moroccan South (RBOMS); Khettaras of Haouz which remain the most famous of all Morocco’s khettaras, known by Agoudal, and located at the south of the old capital of Almoravides, Marrakech; The System khettarien of Ouled-berrhil (plain of Souss); Khettaras of Errachidia and Arfoud, Dadès, Tinejdad, province of Errachidia in east of Ouarzazate; Khettara of Ouled-Sbaïr on left bank of the Oued Souss; Khettara d’Afra in Agadir lehna - Province of Tata.

Historians have agreed that the ‘khettara’ was developed in Morocco by the Almoravids. Some historians and geographers have stated that the city of Marrakech, the capital of Haouz, was born thanks to the exploitation of underground water by the khettara system.

It is practiced in accordance with traditional rules and customary laws that have always provided social coherence and are embedded within the population.

#### Threats and Opportunities

Technical problems resulting in the lowering of the water table level and social problems such as the separation of the factors of production, the fragmentation of rights following the many legacies and sales and mortgages of water rights by rights holders. Not to mention the great complexity of rules of distribution worsened by the growing number of users.

#### Cultural Values and Systems

An original system to collect underground water while minimising evaporative losses. The khettara does not present any risk of overexploitation, it regulates itself according to the natural recharge of the groundwater. Naturally, unless extended climatic events (in case of several years of drought), it provides water permanence for domestic and agricultural needs.

Historians have agreed that the ‘khettara’ was developed in Morocco by the Almoravids. Some historians and geographers have stated that the city of Marrakech, the capital of Haouz, was born thanks to the exploitation of underground water by the khettara system.

Farmers / tribes carry out this practice.
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<tr>
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</thead>
<tbody>
<tr>
<td>Lebanon</td>
<td>Folklore and symbolism</td>
<td>Based on popular culture and beliefs giving a sense of home, comfort, pride.</td>
<td>Highlights and reminds people of the beauty and importance of nature, and the links to people’s livelihood and survival. These include bird names in songs, nature in poetry, and stories for children with important animal characters, etc.</td>
<td>In all of the three countries. Example: Lebanon’s most renowned singer Fayrouz in her song “Ya Tayr” “Bird”, The Famous Indian story about animals translated to Arabic a very long time ago and read to children called “Kalila wa Domna”. In Lebanon the symbolism and great importance of the mighty Lebanese Cedar needs no introduction.</td>
<td>Great poets, philosophers, and writers still have this bond to nature and always publish songs and stories that highlight the importance of nature in a world of globalization.</td>
<td>The value and importance of this type of practice is losing its identity due to globalization.</td>
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<tr>
<td>Tunisia</td>
<td>The celebration of Spring</td>
<td>This practice is an important feature of Berber communities.</td>
<td>By celebrating the coming of spring, people celebrate the values of fertility. They venerate the marabout to express their appreciation for this fertility. Devoting a whole day to the celebration of Spring is proof that people still understand the value of nature and its conservation. This event affects younger generations too, it is indirect environmental education for children.</td>
<td>A lot of regions celebrate the coming of spring.</td>
<td>Its longevity proves its sustainability.</td>
<td>Although still practiced, amongst the younger generation it is perhaps not so popular today.</td>
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For Muslims, the olive tree is a sacred tree, and it is mentioned in the Quran. The olive tree has a durable character which means that they provide a permanent nourishment source. The culture is part of a logical investment in terms of long term economic return / profitability. The olive tree is an identity symbol for the Sahel. The attachment to the cultivation of olives is also linked to the desire to safeguard family traditions.

Tunisia

Olive collection and symbolism

The owners of the olive groves in Kalaa Kbira bring in the olive harvest with festivity. The festival is celebrated during one week in December. Each family has a revered saint to whom it offers this event.

When a symbolic importance is placed on a species it not only connects people to that species but to nature in general. Therefore these types of practices steeped in belief are all very important in connecting people to place.

Kelaa Kbira in Sousse

An ancient practice

The owners of olive groves. The children gather olives fallen from the tree and sell them at the oil mill.

The olive tree has a durable character which means that they provide a permanent nourishment source. The culture is part of a logical investment in terms of long term economic return / profitability. The olive tree is an identity symbol for the Sahel. The attachment to the cultivation of olives is also linked to the desire to safeguard family traditions.

Threats: Dispersion of large landowning families; Excessive urban pressure.

Opportunities: The attachment of the farmers to their olive trees; an owners’ association was created to protect the olive growing heritage.
### Lebanon

**Wild plants that are used for eating and curing**

- Important ingredients in Middle Eastern meals and industries.

Food is absolutely at the heart of Middle Eastern culture. Women at different seasons harvest medicinal and edible plants to be used in traditional food products.

- Gives a landscape character for certain areas, food for animals, their presence shows the biodiversity of an area. Connects people very concretely to their natural environment.

In all forests and woodlands. E.g. Upper Akkar, Aarsal and Hermel in Lebanon. Jordan: Wadi Mujib Nature reserve

Women mainly in rural areas where knowledge has been transferred through generations e.g. Andket in Upper Akkar.

Groups whose lifestyle can be classified as semi-urban such as Bedouins, shepherds, and farmers know pretty well about these plants. More than a hundred species of wild plants are consumed for edible and medicinal purposes. For example, "Aseen", Sage is harvested in Spring, distillated and used for stomach pain. "Tayoun" is collected in Spring and dried up for healing injuries.

Over-harvesting of medicinal and edible plants to the extent of having some being listed as endangered; use of pesticides; etc.

### Tunisia

**Making pillows and mattresses from posidonia (seaweed)**

- Local people make pillows and mattresses for newly weds.

Based on hygienic principles, Posidonia does not allow the development of parasites. People are conscious of the benefits of posidonia meadows so they collect only from the seashores.

Telga (Djerba), Cap Bon

Local populations collect Posidonia for use when it is dry.

Disappearance of expertise and local knowledge.

### Turkey

**Olive tree leaves used as herbal medicine**

- Olive tree leaves are used to cure the diabetes in Eşme province of city of Uşak.

The use of olive tree leaves as herbal medicine is known in Anatolia since the Hittite times. This traditional knowledge is carried to Anatolia of today.

Unknown. The local traditional knowledge of medicinal use of the olive tree leaves is an ancient culture which continues in this niche area of Anatolia. Although the conservation impact is unknown, it could be the subject of future research.

Eşme province of city of Uşak

The initial example of such a use is seen in Hittite records. Today it is practiced only in Eşme province of city of Uşak.

As long as the rural setting continues, the practice will live.

Local villagers

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**Country, Name of Practice and Description**

- Lebanon: Wild plants that are used for eating and curing
- Tunisia: Making pillows and mattresses from posidonia (seaweed)
- Turkey: Olive tree leaves used as herbal medicine
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<td>Turkey</td>
<td>The practice embodies the traditional knowledge about the use of this wild species.</td>
<td>Unknown. The use of Adana göknarı (Abies cilicica) could have enhanced the local conservation value of it.</td>
<td>Aladaglar province of Tauros mountains</td>
<td>The traditional knowledge has passed through the generations and has become embedded in the local culture.</td>
<td>As long as the rural setting continues, the practice will live.</td>
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<tr>
<td>Use of Adana göknarı (Abies cilicica) as herbal medicine.</td>
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<td></td>
<td>Unknown. Although practiced by several generations.</td>
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<td>In the Aladaglar province of Tauros mountains the paste made out of the plant named Adana göknarı (Abies cilicica) is used to cure stomach ulcers.</td>
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<td>Local villagers</td>
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<tr>
<td>Turkey</td>
<td>These practices embody the traditional knowledge about the use of these wild species.</td>
<td>Unknown. The use of saclı meşe (Quercus cerris) could have enhanced the local conservation value of it.</td>
<td>The villagers of Umurbaba Dağı in Usak</td>
<td>The traditional knowledge has passed through the generations and has become embedded in the local culture.</td>
<td>As long as the rural setting continues, the practice will live.</td>
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<td>Use of saclı meşe (Quercus cerris) as herbal medicine</td>
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<td></td>
<td>Unknown. Although practiced by several generations.</td>
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<tr>
<td>The villagers of Umurbaba Dağı in Usak use the fruits of saclı meşe (Quercus cerris) to stop diarrhoea and bleeding.</td>
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<td>Local villagers</td>
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<tr>
<td>Turkey</td>
<td>These practices embody the traditional knowledge about the use of these wild species.</td>
<td>Unknown. The use of mazı meşesi (Q. infectoria) could have enhanced the local conservation value of it.</td>
<td>Kişlak village of Yayladağı province of city of Hatay</td>
<td>The traditional knowledge has passed through the generations and has become embedded in the local culture.</td>
<td>As long as the rural setting continues, the practice will live.</td>
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<td>Use of mazı meşesi (Q. infectoria) as herbal medicine</td>
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<td>Unknown. Although practiced by several generations.</td>
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<td>The fruits of mazı meşesi (Q. infectoria) are used to cure diabetes in Kişlak village of Yayladağı province of the city of Hatay.</td>
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<td>Local villagers</td>
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<tr>
<td>Turkey Use of kızıl çam (Pinus brutia) as herbal medicine</td>
<td>The practice embodies the traditional knowledge about the use of this wild species.</td>
<td>Unknown. The use of Turkish pine (Pinus brutia) could have enhanced the local conservation value of it.</td>
<td>Yanıktepe province of Mersin</td>
<td>The traditional knowledge has passed through the generations and has become embedded in the local culture.</td>
<td>As long as the rural setting continues, the practice will live.</td>
</tr>
<tr>
<td>Red pine also known as Turkish pine (Pinus brutia) is used as a herbal medicine in Yanıktepe province of Mersin. The cones are collected and divided into two, boiled and drunk as a tea. It cures stomach pains and intestine related discomforts.</td>
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<td>The use of an endemic subspecies of a thyme called ‘çökelek keğiği’ (Origanum hypericifolium) used as herbal medicine. The use of an endemic subspecies of a thyme called ‘çökelek keğiği’ (Origanum hypericifolium) is boiled and drunk as a tea to cure diabetes. This endemic plant grows in Muğla and Denizli regions of the Agean.</td>
<td>The practice embodies the traditional knowledge about the use of this wild species.</td>
<td>Unknown. The use of an endemic subspecies of a thyme called ‘çökelek keğiği’ (Origanum hypericifolium) could have enhanced the local conservation value of it.</td>
<td>Muğla and Denizli regions of the Agean.</td>
<td>The traditional knowledge has passed through the generations and has become embedded in the local culture.</td>
<td>As long as the rural setting continues, the practice will live.</td>
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<tr>
<td>Turkey</td>
<td>These practices embody the traditional knowledge about the use of these wild species.</td>
<td>Balikesir province</td>
<td>The traditional knowledge has passed through the generations and has become embedded in the local culture.</td>
<td>As long as the rural setting continues, the practice will live.</td>
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<tr>
<td>Use of prickly juniper (Juniperus oxycedrus), cranberry tree (Cornus mas), beech tree (Fagus orientalis), and endemic species of thorn apple (Crataegus aronia) as herbal medicines.</td>
<td>Unknown. Although practiced by several generations.</td>
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<tr>
<td>In Balikesir province fruits of prickly juniper (Juniperus oxycedrus) is used for stomach illnesses and making a tea of out the fruit is used to cure bronchitis, the fruits of cranberry tree (Cornus mas) and the beech tree (Fagus orientalis) are used to stop diarrhea and an endemic subspecies of thorn apple (Crataegus aronia) in this region is used for curing diseases in relation to urinary tract.</td>
<td>Local villagers</td>
<td>Local villagers</td>
<td>X</td>
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<tr>
<td>Spain and Portugal</td>
<td>The practice is sustainable but threatened.</td>
<td>The traditional knowledge has passed through the generations and has become embedded in the local culture.</td>
<td>The traditional knowledge has passed through the generations and has become embedded in the local culture.</td>
<td>As long as the rural setting continues, the practice will live.</td>
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</tr>
<tr>
<td>Traditional harvesting of wild products, e.g. plants and berries for food, medicinal and craft applications.</td>
<td>An ancient practice carried out mainly by local women.</td>
<td>An ancient practice carried out mainly by local women.</td>
<td>An ancient practice carried out mainly by local women.</td>
<td>An ancient practice carried out mainly by local women.</td>
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<tr>
<td>Based on food culture. Popular culture to benefit from natural resources in a sustainable manner and preserve ancient knowledge of great social importance.</td>
<td>Preservation of wild species and varieties, which require their traditional use for their conservation.</td>
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<tr>
<td>Low transmission rates of traditional knowledge, use of pesticides and agricultural intensification.</td>
<td>The traditional knowledge has passed through the generations and has become embedded in the local culture.</td>
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<tbody>
<tr>
<td>Lebanon Salters: Salt mines for the production of local Mediterranean sea salt</td>
<td>A cultural practice mostly performed in coastal cities and nearby areas of the Mediterranean Sea</td>
<td>The mud areas used in the salt production are popular places for wading birds and other migrating species.</td>
<td>Coastal cities Example: Enfeh and Shekka- North Lebanon Jordan: Dead Sea Coast Syria: Tibnah Salt Mines</td>
<td>Phoenician times Fishermen mostly</td>
<td>Rehabilitation of the salt mines and their protection is urgently required.</td>
</tr>
<tr>
<td>Spain and Portugal Salters: Salt production by seawater evaporation in the sun.</td>
<td>Very old techniques which have generated artificial structures important for the local economy and the preservation of agricultural, fishery and livestock products.</td>
<td>Exceptional importance to many species adapted to the brackish water and to provide essential minerals to very remote areas. Creation of important biotopes for biodiversity, with species such as flamingos.</td>
<td>Coastal villages in the Peninsula. An ancient practice carried out local communities.</td>
<td>A dying industry not afforded so much attention.</td>
<td>Low transmission rates of traditional knowledge, use of pesticides and agricultural intensification.</td>
</tr>
</tbody>
</table>
The following case studies from each of the sub-regions highlight in more detail some of the main practices we have looked at during this Rapid Assessment.
Transhumance is the movement of livestock in search of water and food. It differs basically from nomadism in that only the herders who lead the flock participate, leaving their families behind. Transhumance in Spain is the seasonal movement of herds to summer pastures in the mountains, at the onset of drought in the valleys, and their return to wintering areas in late autumn. In the Iberian Peninsula this practice is some 6,000 years old, with Neolithic pastoralists following the ancient paths traced over millions of years by wild herbivores. The long distance between southern valleys and northern mountains, about 500 Km of plains that are extremely cold in winter and very dry and hot in summertime, forces the herds to travel four or five weeks in spring, and the same period back in autumn. Each herd is led normally by five people, each with one shepherd dog to handle the livestock, and five defence dogs to protect the herd against wolves and bears.

The Spanish herders’ rights to move freely across the territory and to feed their herds along the drover roads were legally recognized in 1273 by King Alfonso X the Wise, who created a powerful guild of shepherds, the Concejo de la Mesta, protecting its traditional pathways, the cañadas, 75 m wide. This network of routes, 125,000 Km long with a total area of over 400,000 hectares, links together the different Spanish regions. Twice a year, in January or February in wintering areas and in September or October in the summer pastures, any dispute over animal leases, properties, loss of livestock or abuses was settled by the Council of la Mesta, the representatives of “the four snowy mountains”, Soria, Segovia, León and Cuenca.

The council was held usually in a church or open field, and considered valid if at least 40 herders concurred. Both men and women had a voice and a vote, if they owned at least 50 transhumant sheep. Until the early XIX
century, 5 million sheep, goats, cows and pigs crossed Spain twice a year, walking and grazing along the drover roads. However, since the early XX century the construction of railways allowed rapid transport of livestock and food by train, virtually bringing to an end the long-distance transhumance, although short-distance droving was preserved. The gradual abandonment of most of the drover roads and of the seasonal movement of herds had serious ecological impacts: in the lowlands it led to overgrazing, loss of biodiversity and failure of the renewal of trees, which practically have not regenerated in the last century; in the mountains it brought about the invasion of shrubs and ferns that destroy valuable grasslands, bringing to extinction many species and creating a serious risk of devastating wildfires.

To deal with this serious situation, which affects the entire Spanish territory, we created in 1992 the Association Concejo de la Mesta. Its aim is to recover the traditional long-distance transhumance on foot with large herds of sheep and cows, in compliance with Article 8.j. of the Convention on Biological Diversity, just adopted by the United Nations. This initiative, reviving the spectacular image of the transhumant herds crossing Spain, including through the centre of Madrid, had an important national and international impact.

In 1995 the Spanish Parliament approved a new Law for the Protection of the Drovers’ Roads (Ley 3/95 de Vías Pecuarias) as “ecological corridors essential for the migration, dispersal and genetic exchange of wild species”, declaring them “a public property to allow the transit of livestock and a sustainable development, regarding the protection of the environment, the landscape and the natural and cultural heritage”.

The ecological importance of nomadism and transhumance is based on the sustainable use of natural resources without depleting
them. When water and food become scarce in arid lands, herds are moved to other areas where these resources still abound, thus using alternatively vast territories. This movement of herds fertilizes the soil regularly (3 tons of manure daily per 1,000 sheep or 100 cows), spreading grass seed over long distances (about 5 million seeds at 20 Km every day per herd), thus facilitating adaptation to climate change and the creation of carbon sinks in the ground (up to 100 tons of CO2 per hectare). The absence of livestock from grazing areas for long periods of the year allows regeneration of the vegetation and the survival of wild species. Although it is estimated that about 1,000 million pastoralists practice nomadic or itinerant grazing worldwide, Spain is the only country that has a network of protected ways for the movement of the herds, reserving for them 1% of the national territory. The adoption of similar legislation in other countries with nomadic or transhumant pastoralists can contribute to the survival of these cultures, of enormous ecological and social importance.
'The life of insecurity is the nomad’s achievement. Stability has no meaning for him. It is a mode of expression, a feeling he rejects instinctively, not believing in it. He is too realistic to believe in stability. Just as time does not govern him, neither does conformity. He conforms to tribal customs it is true, but only in so far as his own nature permits. He is, in fact the only free man left in the world.'

The Caravan Moves On, Three Weeks among Turkish Nomads by Irfan ORGA, 1958

Our main focus are the two nomadic pastoral groups in Turkey that continue the traditional way of living, namely the Sarıkeçili Yörüks and Koçers.

In both groups the movement is systematic and predetermined where mobility becomes an efficient strategy to use scarce resources for herding animals, mainly sheep for Koçers and goat for Sarıkeçili Yörüks. Animal mythology and symbolism permeate all aspects of nomadic society. Their way of living is in real harmony with nature. As human groups they are part of the ecosystems they pass through. Therefore it might not be accurate to discuss their positive or negative impact on biodiversity simply because it can be argued that nomads as human groups and their way of living embedded in nature, are themselves part of biodiversity.

Turkey’s best known pastoral nomads are Yörüks - a general term for nomads. Today, most of the Yörüks are known to be settled (Seyirci, 2003) nevertheless one group of Yörüks, the Sarıkeçililer migrate seasonally between the Mediterranean coast, mainly from Mersin, inland towards Middle Anatolia. Sarıkeçililer is an indigenous group believed to be descendants of Oghuz Turkiq tribes of Middle Asia, who migrated to Anatolia in the 11th century. However, the Yörük culture may well have been a much older tradition.
Archaeological evidence indicates that nomadic pastoralism has been practiced in Anatolia since Chalcolithic times (around 5,500-3,000 BCE) (Wossink, 2009) therefore the culture could have been an integration of an existing practice combined with new cultures migrating from Middle Asia in the 11th century.

The Sarıkeçili Yörüks consist of a population living in 110-120 tents (approximately 5-10 people per tent). They reside at Mersin-Erdemli, Silifke, Gülnar, Aydınçık, Bozyazı coastal towns in winter months and Konya-Seydişehir, Beyşehir, Bozkır, Ahırlı, Akören in summer months (Tuztaş, 2012). They have two periods of migration approximately 1-2 months in spring and autumn (personal conversation with Sarıkeçili Adem C. 11.09.2013).

They live in what they call ‘kara çadır’ literally meaning ‘black tent’ all year round which is made of goat hair. Their main livelihood is goat herding. They also produce milk, yogurt, butter and cheese as by-products of the goats. These products are sold in markets or to the villages nearby their camps (Seyirci, 2000).

For a period their goats were allegedly causing damage to the forestlands they feed on along the route therefore allowed to follow their traditional migration route (Serkan Ocak, Radikal Newspaper 5/17/2010). Recently the ban was removed following a campaign led by the Sarıkeçililer Federation. The positive effect of the goats preventing forest fires and regenerating the forest has now been accepted by the government bodies and was the main argument to getting the ban lifted.

Up until the 2000s, Sarıkeçililer were migrating with camels but today most of them use vehicles instead. Decreasing grazing land, difficulty in controlling the camels in campsites, fines issued when camels harm the fields of settled communities, and some of the migrating routes becoming roads are some of the main reasons...
why Sarıkeçili communities are replacing camels with vehicles (Aksoy, 2012).

However, even today camels are considered as holy animals according to the communities’ Islamic belief as they call the camels ‘hamaylı’. Camel meat, milk, wool are believed to cure some illnesses like haemorrhoids, breathing problems, throat ache. It is also believed that when a child is ill he/she should be passed under a camel to be cured. Sarıkeçili Cemal Amca has also mentioned that the villagers (settled communities) nearby their camps also believe that the camel would cure the children and whenever they are passing through the village they are stopped and sick children are brought out to pass under their camels (personal conversation with Cemal C. 28/08/2013).

Sarıkeçili Yörük routes traverse some of the most diverse Key Biodiversity Areas (KBA) in the Mediterranean region. One of these Key Biodiversity Areas on the Yörük routes are the Bolkar Mountains located in Mersin, Niğde, Konya regions. The KBA contains 300 endemic plant species and an incredible range of wild fauna (Doğa, 2006). Sarıkeçili Yörük routes are believed to contribute to this biodiversity by maintaining gaps within the forests, which allows Maquis (scrubs) and a variety of plants to survive. Whereas, if the Yörüks were not present in this habitat the forest would have consisted of dense red pine and it would not be possible to have this variety of endemic plants. Also goats, as well as preventing forest fires by maintaining the open spaces, are believed to be fertilising and distributing the seeds within the forest (interview with Çağlar İnce and Ferdi Akarsu, Antalya, 27/08/2013). The impact of the Sarıkeçili Yörük to biodiversity is unstudied. However, their routes overlapping with rich biodiversity areas is in all likelihood (going by studies on biodiversity impact from transhumance in Spain) not a coincidence. An interdisciplinary team walking with Sarıkeçili
Yörüks to record the impact would be the subject of an important future study.

Koçers are a community living a nomadic way of life in the Southeast of Turkey and they are occupied with sheep herding and cattle rearing. The group has hardly been researched mainly due to the unstable environment in the Kurdish regions of Turkey in relation to the war between the Turkish state and the Kurdish guerrilla group PKK. The conflict between the state and Kurdish guerilla group PKK for the last 30 years has also affected the Koçers in a negative way (Thevenin, 2011). Large dam projects in the region and monoagriculture projects by state initiatives have reduced the grazing land to be utilized by Koçers.

Their migration routes are within the provinces of: Şanlıurfa, Diyarbakır, Elazığ, Mardin, Batman, Cizre (Southeast of Turkey).

Kurdish nomadic pastoral practices are in the area of the ancient Fertile Crescent, where the first sheep domestication took place. The pastoral heritage of the Koçers and their cultural landscape management is part of the ecosystem created since Neolithic times in the region. The Koçer way of life as an integrated lifestyle with the environmental cycle indicates a positive impact in terms of the conservation conditions of the habitat they live in. Similar to Sarıkeçili Yörüks an interdisciplinary team walking on the Koçer migratory routes could be a future study in order to understand the impacts of their way of living on the conservation of the environment and contribution to the maintenance of biodiversity in the region.
Dry stone masonry techniques are a very significant part of the Mediterranean’s intangible heritage, holding their roots back to the Neolithic era. This building technique has left an imposing mark on the landscape of the Basin, including the Balkan Peninsula, becoming one of its main cultural elements. In many parts of the Balkans, dry stone construction was the dominant form of constructing land fences, agricultural infrastructure and modest human habitats until the mid 20th century.

This practice cannot be considered as distinct to the Balkan region, nor of the Mediterranean Basin (despite being one of its dominant landscape elements), as it can be traced in every continent of the planet. What may be considered as distinctive, is the dense presence of dry stone walls and terraces in many parts of the region (such as the Cycladic islands in Greece), as it reflects the continuous efforts of its inhabitants to overcome the limitations posed by the highly diverse, small-scale, and relatively arid landscape. That is, to use materials available at a close distance, while simultaneously cleaning their fields, in order to construct fences in places often in shortage of wood; most importantly, to transform steep slopes into cultivatable areas, making optimal use of the limited land resources, sustainably managing water resources and helping overcome unfavourable soil conditions (dry stone terraces prevent erosion and collect soil enriching the productive capacity of the landscape even when they are abandoned).

Dry stone masonry is an excellent example of sustainable natural resource management, as it is based on recycling waste materials – the walls and other constructions are made of stones that are gathered when cleaning the fields – whereas the resulting constructions are fully recyclable and, if needed, easily degradable. Dry stone walls have significant value for biodiversity conservation, as their
cavities provide shelter to numerous species of animals such as moths, reptiles and birds, while they also support several species of flora; these include various lichens and other species (such as the amaranth) whose presence creates favourable conditions for the development of more complex plants. In fact, consecutive dry stonewalls are truly organic networks that offer favourable conditions for life, contributing to the enhancement of biodiversity in the area they are located. Furthermore, in contrast to modern concrete walls, dry stone walls are very well adapted –visually and functionally– to the rural landscape. In terms of longevity and maintenance, they do not exhibit the rigidity of concrete walls; they are characterised by an adjustable structure which can be deformed over the years without cracking, being better adapted to the constant pressure of soil and water.

The dry stone masonry techniques have been deeply embedded into the life of agrarian societies of the Basin for many centuries, demonstrating great sustainability through time. Although the practice has diminished with the arrival of concrete in the 20th century, it still holds economic value for many traditional activities like pastoralism, olive, vine and vegetable cultivation, while it is also growingly important as a skill needed in order to restore traditional cultural landscapes, with an eye to support tourism-related activities.

Furthermore, it has immense practical importance for future generations, as dry stone construction skills produce practical and usable buildings from local materials and means, eliminating external costs and the necessity for machinery. Recent initiatives to revive these skills through educational programmes – as the ones supported and supervised by Dragodid in Croatia– create room for optimism, as they bring together skilled craftsmen and volunteers, helping to transfer traditional ecological knowledge in a process that is both didactic and fun to participate. Much is still needed to support this practice on a wider scale.
/ WHAT IS THE HIMA? /

Hima in Arabic means “protected place or area” that dates back to 1500 years ago in the Arabian Peninsula. It was initiated before Islam, when tribes conserved certain areas for a period of time allowing them to regenerate in order to retain their livelihood in harsh environmental conditions.

Islam added to the Hima practice values for the benefit of the poor such as equality and common benefits. Ever since, Himas have helped conserve various ecosystems, nature, and biodiversity in the Arab world. They have helped local communities living next to them to pursue the sustainable use of renewable natural resources for their livelihoods.

/ FEATURES OF THE HIMA /

1. Cultural tradition for protecting and managing land resources for the benefit of people where they have the right to use the land, especially for grazing.

2. Tradition that realizes the need to distribute scarce resources.

3. Allows the local communities to participate in conserving, monitoring, and maintaining the natural resources for their own investments and advantage in a sustainable manner.

4. Distributes resources equally among members of the local communities.

5. Provides socio-economic benefits.

/ THE HIMA TODAY /

Due to political, economic, and social changes in the region, especially after the World wars in the 20th century, the Hima system was weakened. Management of natural resources shifted towards centralized government.
authorities with a minimal role for local communities. Though the hima concept was dropped in the Middle East by decision makers, some people still practice it notably in Saudi Arabia, where out of 3000 traditional Himas, a few still remain, such as Hima Al Fawqa and Hima Al Azahirah.

1. The Himas are managed by local people from the community where individuals are able to influence decisions made for the management of the Himas.

2. The management has become more practical and flexible to serve nature and the community, with the addition of values from Islamic culture.

3. Most of the ongoing Himas today have a management system that is connected in one way or another with the first established traditional Himas. These Himas were managed by a Shaykh (tribe leader) and guard who look after the conservation of renewable resources and sustainable development. In current Himas, similarly the mayor supported by a local committee and guard govern the Hima management.

4. Himas still play an important role in providing food especially in dry and poor seasons.

5. The Hima areas themselves are areas of knowledge, science, research, and understanding of nature as a whole and raising the socio-economic status of a community.

6. More appealing to local communities than nature reserves.

/ REVIVAL OF THE HIMA IN THE WEST ASIA REGION /

It was applied as a system for organizing, maintaining, regulating, and utilizing natural
pasture and rangelands in a way fitting with ecosystems and local practices. After coming across several old maps of Lebanon that show several “Himas”, SPNL started reviving the Hima approach in collaboration with municipalities in order to promote the conservation of Important Bird Areas (IBAs) and conserve the practice of sustainable use of natural resources. Accordingly, SPNL announced several Himas in Lebanon; Hima for sustainable hunting, Hima for sustainable fishing, Hima for sustainable grazing, and Hima for sustainable use of water resources.

SPNL’s experience with Hima revival showed that people are more ready to accept conservation initiatives when they emanate from their heritage and language (Himas as compared to nature reserves). The newly established Himas responded to the three sections of sustainable development (economic, social and environmental). They retained the values of traditional Himas, but added the modern scientific approaches of assessments, monitoring, and participatory approaches for community involvement. Communities accepted the new Himas since they were a reason for enhancing their economy, introduced and opened different social groups to one another, and taught them how to conserve their environment and have a sense of belonging to the environment they are surrounded by. Most importantly, Himas retain decision making at the community level.

With the support of SPNL, 8 Hima Sites in Lebanon have been established, under the management of local municipalities: Ebl Al Saqi (IBA), Kfar Zabad (IBA), Anjar (IBA), Al Qoleileh (KBA), Al Mansouri (KBA), Upper Akkar (IBA and 21 % forest cover), Andaket, and Al Fekha; representing ecosystems from marine to wetlands, forests, valleys and mountain tops. In a short time Himas have contributed to positive change in the conservation of species. For example within
one year there was an increase of 10% of the globally threatened Syrian serin bird in Anjar Kfar Zabad wetlands, and over 50 nests of Sea Turtles at Hima Mansoury/Qolileh.

In Jordan, the IUCN ROWA in collaboration with the Ministry of Agriculture and the Arab Women Organization, has revived the hima approach in four Jordanian villages within the Zarqa River Basin: Duliel, Hashemeyeh, Bani-Hashem, Hallabat.

The Himas were established due to the increase in the Jordanian population, which resulted in land and water mismanagement due to weak coordination between government agencies and local communities, lifestyle change, poor marketing of livestock and agricultural products, and over grazing in specific areas by Bedouin shepherds.

In Syria, trainings were made for the Hima Approach and its management, values, rules and benefits. Municipality members and the community were trained by SPNL on the value of the Hima approach and its management, which led to the declaration of Hima Akroum. Based on that, the Ministry of Agriculture approved Akroum as a Hima for Pasture, which is an extension to the Akroum village in Lebanon.
During our part of the Rapid Assessment we observed the following:

- Pieces of old growth forest protected in different areas
- Groups of sacred trees admired and visited by people
- Well respected grazing areas
- Pieces of land declared no hunting zones
- Sources of water protected and well managed
- Well managed landscapes with traditional rules

All of these organically emerging things, extremely important for the environment, we discovered were related to cultural practices driven by the presence of a Marabout...

This led us to try to understand more about the links between communities, their Marabouts, and nature. Palm groves, meadows, paths, peaks, slopes, valleys, springs and wetlands all show a strong link between places and people and the intense relationship of local history, real or imagined, which continues to thrive until today: natural sources that are deemed to give health or ‘Baraka’ (luck). All of these references to the divine and the supernatural world help guarantee the continuity of place and the strong connection with people.

Whether in Morocco or Tunisia cultural practices are interconnected – each strongly influenced by the loss of another.

/ MARABOUTISM /

A Marabout is an ascetic man most often claiming Islam or Muslim syncretism. Considered a holy man and a sage, Marabouts are subject to a popular cult in North Africa and in varying forms throughout Africa. After the death of a saint, his tomb becomes a place of pilgrimage that attracts people for different social, religious or therapeutic reasons. People commonly use the services of healers at the
Marabout to protect them from the evil eye and djinn spirits, with the Baraka of the saint. They also believe in the great powers of the saints who are mediums, exorcists, writers and teachers, and who traditionally have held much weight in the community.

Rituals in the Marabout (El Hadhra) usually consist of two elements:
1. the hizeb is the recitation of prayers
2. the ijdeb or ecstatic dance that leads to a state of trance to drive away evil spirits and jenouns (spirits)

These two stages are separated by a break when offerings are given. It is during these trance dances that sometimes spectacular events take place with sabres, coals, snakes and so forth.

The strong and deeply rooted relationship between people and their Marabouts often results in the full protection of their sites. This plus the fact that they are also places of learning, makes them hugely significant for the environment.

As an example of their influence we can look at Marabouts and other cultural practices:

/MARABOUTS AND TRANSHUMANCE/
Shepherds always put their herds under the protection of a saint. The holy men ensure the fertility and prosperity of livestock and in return, farmers give gifts and make sacrifices.

/MARABOUTS AND AGDAL/
For the use of pastoral areas, the Saints established rules for using Agdal (protected grazing areas).

This “ritual cycle” begins on the eve of the opening of the Agdal as farmers limit the boundaries of Agdal. The cycle ends with a collection of lumps of butter offered by transhumant shepherds who are descendants of the patron saint of Agdal. For example, Agdal du Yagour (Moroccan National Park Toubkal) is under the protection of the saint Sidi Boujmaa.
This endeavour was a Rapid Assessment and has its limitations. It is not comprehensive, it is a broad brushstroke view of the types of practices that persist today, sometimes against all odds, and that contribute to biodiversity conservation and natural resource management. It also provides only a cursory examination of each of the practices and we acknowledge this.

However, from it we have clearly identified the great potential for conservation that exists in this area of study and the many ways in which a group of organizations like ourselves could possibly bring support and recognition to the practitioners and help strengthen the practices. This potential exists primarily in the study and assessment of the cultural connections that exist between communities and nature and the development of activities that can support these connections and the knowledge and practices that underpin them.

For the second phase of this project we aim to pull together on one set of practices: Transhumance and nomadic and semi nomadic pastoralism, to establish how we can work together to advance the knowledge related to biodiversity conservation and to start to lay the basis for supporting the practice across the region. In the future we hope to bring support to many of the important practices identified in this exercise.
The Mediterranean Consortium for Nature and Culture is:

DiversEarth: overall coordination
Doga Dernegi: for Turkey
Trashumancia y Naturaleza: for the Iberian Peninsula
Med-INA: for Greece and the Balkans
Society for the Protection of Nature in Lebanon (SPNL): for the Middle East
WWF North Africa: for North Africa
The MAVA Foundation: overall financial support and technical advice
Fauna & Flora International: for technical advice
IUCN: for technical advice

Plus friends, consultants and other organisations who have helped with our initial work (see acknowledgements).

Website: www.medconsortium.org
/ DIVERSEARTH THANKS /

Paule Gros, Marko Pecarevic and the MAVA Foundation team for all their support; The wonderful technical teams in each sub-region: Shalimar Sinno, Assad Serhal and team in Lebanon; Sana Mzoughi, Faouzi Maamouri, Rabia Ben Bouzid, Lahcen Chillasse and team in North Africa; Aphrodite Sorotou, Giorgos Dimitropoulos, Thymio Papayanis and team in Greece; Banu Aydinoglugil, Engin Yilmaz and team in Turkey; Jesus Garzon and team in Spain; Divya Venkatesh and Sandra Spissinger and the DiversEarth team, Mark Infield for guidance and advice; Sarah Eckersley for proofreading.

/ SPNL THANKS /

Mrs. Zeina Tamim, Ministry of Agriculture, Lebanon; American University of Beirut; Dr. Manal Nader, Dr. George Mitri, and Shadi Al Andari, University of Balamand, Lebanon; Mr. Adnan Al Budeiry; Friends of the Earth Middle East, Jordan; Mr. Laith Al Moghrabi, Jordan; Dr. Carol Palmer, British Institute in Amman; Mr. Ibrahim Khader, Birdlife, Jordan; Dr. Ousama Al Noury, Birdlife, Syria.

/ TRANSHUMANCIA Y NATURALEZA THANKS /

Joana I. Robalo (Portugal), Ana Zarandieta (Andalucia), Fernando Pulido (Extremadura), Juan Carlos Zamarreño (Castilla y León), Manuel Bahillo (Asturias) and Marity González y Eva Macho (Cantabria) for their important collaboration in this study.

/ DOGA DERNEGI THANKS /

President of Executive Board Doğa Derneği and founder of Doğa Okulu: Güven Eken, Orhanlı Village Resident and Agricultural Engineer: Süleyman Eken, Doğa Okulu volunteers, Sarıkeçili Yörük family: Cemal Candan, Fadime Candan, Adem Candan, Emine Candan, Süleyman Candan and Musa Candan, Yeditepe University: Dr. Hilal Ayşe Tuztaş, Bilgi University: Dr. Sezai Ozan Zeybek, Karamanoğlu Mehmetbey University: Hüseyin Aksoy, Doğa Derneği members: Ferdi Akarsu, Mehmet Emin Bilmez, Okan Ürker, Çağlar Bebeci, Oğuzhan Çoban and Çağlar İnce, Antalya City Museum Director/Antropologist: Atilla Erden, Mehmetalani Village Headman: Metin Aktaş, Kızılkeçili Village Headman Ali Deveci, Tahtacı Culture Ethnography Museum Founder: Alibey Kudar, Photographer: Ömer Yağlıdere, Documentary Film Maker: Yüksel Aksu, UNION of the Chambers of Turkish Engineers and Architects and Chamber of Agricultural Engineers, Survival of Traditional Fishing Association: Kenan Kedikli and Prof. Nezih Bilecik, Researcher on water and wind mills: Kenan Dudan, Atlas Magazine, last but not least special thanks to Doğa Derneği staff members for their solidarity during Gezi events and support at the duration of this project.

/ MED-INA THANKS /

There are too many people to properly thank for access to data used in this work. They include: the MAVA Balkan Platform partners; the Dinaric Arc Parks partners; WWF MedPo, and in particular Deni Porej; Dragodid; Piloiko; Pindos Perivallontiki; The North Pindos National Park; WWF Greece;
the Ethnological Museum of Bulgaria; the Ethnological Museum of Thrace; the Academy of Athens, Ethnography and folklore division; the Hellenic Literary and Historical Archive (ELIA); the Ethnographic Museum of Thessaloniki; Dr Kalliopi Stara; Mr Rigas Tsiakiris, Dr Fanis Dasoulas, Dr Louisa Karapidakis and numerous individuals and small organisations.

/ WWF NORTH AFRICA THANKS /

Rabiaa Ben Bouzid, Chillasse Lahcen, Hana Rzaigui and everyone who participated in the brainstorming day on 26 June 2013 in Tunis.
Full references are available on-line in each of the Sub-regional reports:

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