



Positive Natura 2000 Experiences




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INTRODUCTION



MORE THAN NATURAL RESERVES

By Pía Bucella

The LIFE+ Project Natura 2000: connecting people with biodiversity aims at contributing to the effective implementation of the Birds and Habitats Directives and promote a better understanding and protection of biodiversity as a whole.

Together with the LIFE instrument, these Directives have been the EU's key instruments for the conservation and sustainable use of biodiversity over the past two decades. Thanks to the Habitats Directive, our knowledge of the status and management needs of species and habitats in Europe, and our capacity for action has greatly increased. It has also allowed for increased funding for nature conservation for example using EU agriculture and cohesion funds.

The greatest contribution of the Habitats Directive has been the creation of Natura 2000, the largest coordinated network of protected areas in the world, which includes over 27,000 sites covering almost a fifth of the EU's land territory. In Spain, more than 1700 Natura 2000 sites have been designated. With more than one fourth of its land territory included under the Natura 2000 network, Spain is the Member State that provides a larger total surface to the network. This is an evidence of the rich biodiversity of this country, which is a real biodiversity 'hotspot' in the EU and in the world.

Natura 2000 is much more than nature reserves. It's about people and nature, because it ensures that conservation and sustainable use go hand in hand with benefits to local citizens and the wider economy. It also provides new opportunities for sustainable development, such as recreation and tourism. Natura 2000 has brought new ways of collaboration between local and public authorities, nature conservation organisations, land owners and users and has generated new ways to work with people.

But despite the important success achieved, the implementation of the Birds and Habitats Directive is still a work in progress. Much remains to be done before all species and habitats of EU conservation concern enjoy favourable conservation status. At EU level, only 17 % of the species and habitats listed in the Habitats Directive have attained that goal. The key challenge is currently to ensure that the Natura 2000 sites are effectively managed and restored. Likewise, protection of areas must also cover offshore marine environment where further efforts must be done.

Full and effective implementation of the nature Directives is one of the main pillars of the EU's 2020 Biodiversity Strategy, our plan to halt and reverse the loss of biodiversity and ecosystem services by 2020.



If we are to achieve these objectives, we need to provide the right policy framework and incentives for those who own and manage Nature 2000 sites, so that they are rewarded for the services they provide. Furthermore, we need to ensure that national and EU policies like transport, energy, agriculture, forestry and land-use fully embrace the protection requirements of Natura 2000 and wider biodiversity.

Investing in Natura 2000 is also about investing in our own future. Natura 2000 sites provide us with vital services such as carbon storage, flood conveyance, water quality maintenance. The services provided by the network are estimated to be worth around €200–300 billion per year. This is many times more than the cost of managing the network, estimated at less than 6 billion € per year. The Natura 2000 network constitutes a natural wealth. We all are responsible of conserving and enhancing it.

However, too few people in Europe and in Spain know about Natura 2000 and its values. One of the key actions of the EU biodiversity Strategy is therefore to enhance public awareness and communication about Natura 2000. I hope that this LIFE project will contribute to this objective and wish it all the best success in connecting people with biodiversity and Natura 2000.

Pía Bucella is director of Natural Capital at The European Commission.



INTRODUCTION



OUR REAL WEALTH

By Asun Ruiz

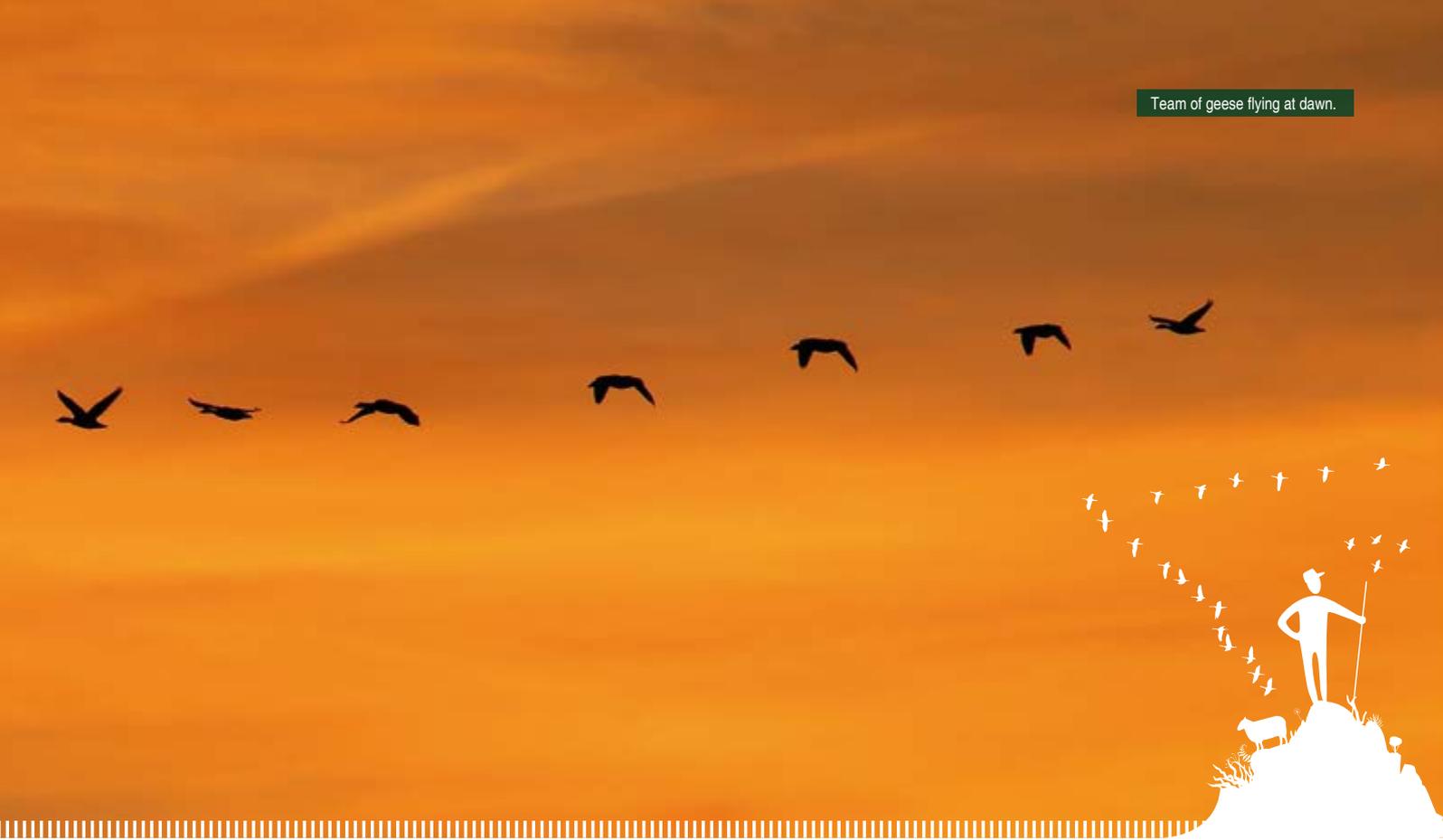
You cannot conserve what you do not know. This slogan has driven SEO/BirdLife's work since its foundation in 1954. For decades, that necessary knowledge has driven and served as the basis for the actions that our NGO has undertaken to defend, restore and disseminate knowledge on some of the most valuable sites in our territory. One of the first of those was Doñana, an initial battlefield where we fought to stop the destruction of a heritage that belongs to all citizens.

It was there, near the Guadalquivir wetlands, towards mid-XX century that the Spanish Society for Ornithology was shaped and where a new kind of europeism was born, too: that of peoples from all countries -scientists, academics, naturalists, common citizens- that took action to make sure one of the natural paradises in the continent didn't dry up. Doñana was a wintering spot for dozens of thousands of European birds and what happened there regarded the whole continent. In this way, before the European Union was born, before the environment reached political agendas and before conservationism exploded as a social movement in every country of Europe, Doñana served to bring about a primitive form of Europe-wide movement behind the flag of nature conservation. SEO/BirdLife was there.

Much has changed in the landscape since then. After 60 years the EU is a 28 member state reality, environmental policy is basic for states and Europe has granted itself a protected area network that is the largest in the world: over 27.000 sites and one million square kilometres form the Natura 2000 network.

However, despite these improvements, there is still a long way to go before we achieve a favourable conservation condition for our natural environment. We must return to the "to know in order to conserve" slogan. It is not very useful to have a Natura 2000 network if, as surveys say, hardly 10 per cent of Europeans know of its existence and meaning. For this reason we must insist on the fact that only what is known can be conserved. The Natura 2000 network will not be totally safe until it lives in the heart of each and everyone of us, until all us, citizens, are aware of the enormous treasure we have in our hands and we fight to avoid losing it.

The publication you have in your hands is part of the effort of SEO/BirdLife to publicize the importance of the Natura 2000 network and to raise public awareness of its conservation. This is about making the most of our real wealth. With the Life+ Natura 2000: Connecting people with biodiversity project we want to make Spanish and European societies see that we are rich in biodiversity and that caring for and respecting that great natural asset is the best guarantee for seeing any crisis through.



Lastly, as SEO/BirdLife Director, I cannot fail to underline the importance that birds have had in the designation processes of the Natura 2000 network and in the overall protection of natural heritage. The Natura 2000 network was founded under two great European directives: the Habitats Directive, of 1992, and the Birds Directive, of 1979, as a result of which thousands of Special Protection Areas for Birds (SPAs) have been created.

It is no coincidence that this type of fauna has deserved a specific directive. Birds are a great indicator of the quality of ecosystems and, because of their ubiquity and mobility, they react quickly to alterations in the environment. So they are a thermometer for environmental changes and also act as a shield for the rest of biodiversity: when you protect birds you conserve the rest of elements that surround them, too.

In fact it has been shown that the most important areas for birds in the whole world -identified by BirdLife International and known as IBAs (Important Bird and Biodiversity Areas)- contain up to 80 per cent of the rest of world biodiversity. Our intention is to make the Natura 2000 network succeed protecting all IBAs -including marine ones- that SEO/BirdLife has helped identify, many of which still lack legal protection.

SEO/BirdLife is a scientific and conservation organization devoted, for 60 years now, to the study, conservation and dissemination of knowledge on birds and nature. Through BirdLife International it is present in 121 countries, working towards a world rich in biodiversity where man and nature can coexist in harmony.

Asunción Ruiz is Executive Director of SEO/BirdLife.



INTRODUCTION

THE LARGEST COORDINATED NETWORK OF PROTECTED AREAS IN THE WORLD

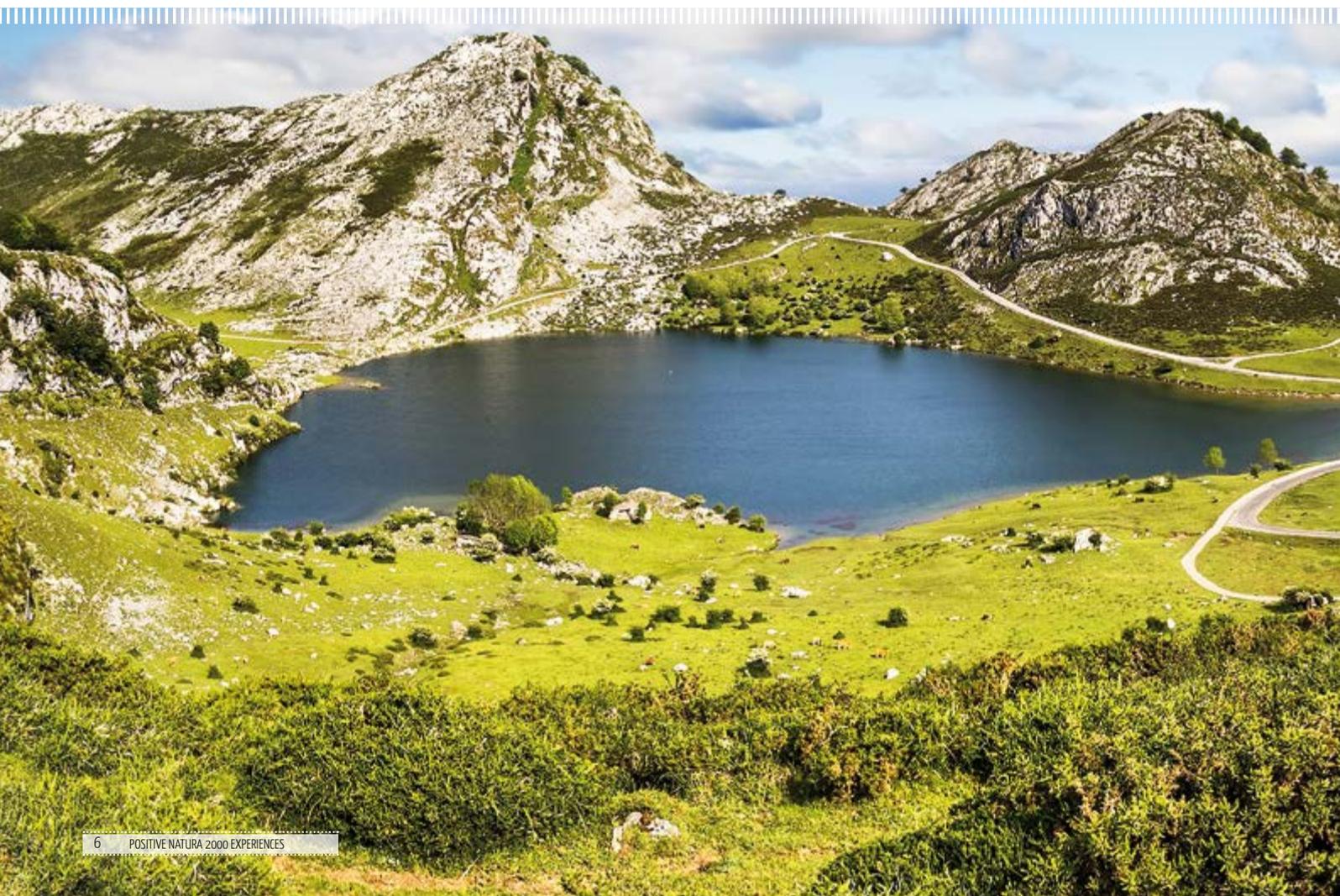


Over 27.000 natural sites of high ecological value all over Europe are part of the Natura 2000 network. With a total surface of nearly one million square kilometres, it is one of the largest networks of protected areas in the world. Nearly 30 per cent of the Spanish territory is included in it, which gives a clear idea of the great wealth of our country in terms of nature and biodiversity. With 1.858 (December 2014) sites, Spain is the state that contributes the most to the network: 14 per cent of the total.

The Natura 2000 network takes into account that the European landscape has been intervened by human beings for thousands of years and that the biodiversity they host is the result of cultural and historic interaction between man and nature. That is why the network

does not propose the creation of strict nature reserves where human activities are excluded but fosters a kind of nature conservation goes hand in hand with the obtaining of benefits for the population and the economy at large. Far from being an obstacle to socioeconomic development, the Natura 2000 network offers new opportunities for the development of traditional productive activities, recreational activities and tourism.

The need to preserve these sites in favourable condition is obvious. The European Commission estimates that the Natura 2000 network renders European citizens vital services like the carbon sequestration, the maintenance of the quality of water or protection against floods or droughts for a value of €200–300 billion per year.



Legal status

The Natura 2000 network was born as such in 1992 and it includes sites designated under two key European laws: the Birds Directive, whose first version is from 1979 and the last from 2009, and the Habitats Directive, from 1992. It includes different types of sites:

- Sites of Community Importance (SCIs) are places that host natural habitats or species of particular value at a EU level. These sites are designated according to the Habitats Directive. The SCI change their name to Special Conservation Areas (SCAs) once they have been official designated by member states and their management plans approved.
- The Special Protection Areas for birds (SPAs) are places that host wild bird species to be conserved in the European Union. SPAs are designated under the Birds Directive.

Both SCIs and SPAs can be land or marine areas, although the marine network is still much less developed than the land network.

The protection of these areas aims at guaranteeing the survival in the long term of the most valuable and endangered species and habitats. In order to achieve this, member states of the European Union must take the due measures to maintain a favourable conservation condition, such as the approval of specific management plans. These management plans are essential to get to know the conservation condition of our natural wealth and to maintain or improve it, as well as to ascertain the necessary funding for it.

In Spain about 26 per cent per cent of Natura 2000 network sites are being managed with a specific management plan, despite the fact that all sites should have had a plan approved before 2011, according to Law 42/2007 on Natural Heritage and Biodiversity.

In spite of the importance of the Natura 2000 network, there is a general lack of knowledge of it in European society. The percentage of Europeans that can say that they know its name and what it stands for verges on 10 per cent.



Lago Enol in the SPA and SCI Picos de Europa.

INTRODUCTION

THE LIFE + ACTIVATE YOUR TRUE WEALTH. RED NATURA 2000 PROJECT

The *Life+ Activate your true wealth. Red Natura 2000* project calls society to action so that it gets to know and becomes involved in the conservation of the Natura 2000 Network. 80 per cent of Spanish citizens live in a place that hosts a Natura 2000 Network site, but in spite of its significance and geographical closeness, the Natura 2000 Network is not very well known by society. Several surveys show that only 10 per cent of Europeans know what it is. The rest have heard of it or know the name but could not explain what it is.

The Life + Activate your true wealth. Red Natura 2000 project aims at increasing that knowledge and bridging the information breach. That is why between 2013 and 2017 very many actions will be undertaken in different realms in order to bring the Natura 2000 Network closer to Spanish society and to get society involved in its conservation.

SEO/BirdLife and Agencia EFE develop this project, supported by the European Union. The co-funders are the Ministry of Agriculture, Food and the Environment of Spain, the Biodiversidad Foundation, Red Eléctrica Española and the autonomous communities of Andalucía, Castilla y León, País Vasco, Navarra, Baleares, Castilla-La Mancha, Madrid and Cantabria.

www.activarednatura2000.org



Activa tu auténtica riqueza
Red Natura 2000



Aerial view of one of the Valles altos del Saja Nansa y Alto Campo, SCI area.

KEY PHRASES BY STAKEHOLDERS

Positive Natura 2000 Experiences



Marian Roldán
El Colletero, Women of Nalda, La Rioja

“The Natura 2000 network should always be run with the interests of the people who live in it in mind; it should encourage public participation and always pay heed to specific, grassroots needs”.



Mikel Durán
Vineyards in a Natural Setting in Noja, Cantabria

“Being in the Natura 2000 network enables us to offer a more complete package of wine, nature, culture and cuisine to satisfy the most discerning customers”.



Narciso Morales
Chestnut Orchards in Valle del Genal, Málaga

“We need to be told exactly what the Natura 2000 network is and what it entails for the people who live in it, otherwise people might be scared that it will restrict their activity”.



Úrsula López
Organic Market Gardens in Soto del Grillo, Rivas Vaciamadrid

“A Natura 2000 seal can boost the value of our produce”



Sagrario Narro
El Acebarillo and the Holly Wood of Garagüeta, Soria

“Knowledge of your natural surroundings helps you to appreciate it in its own right and you also realise all the possibilities it offers. People need to be informed about Natura 2000 and told exactly what it entails”.



Marisa Rodríguez
Mushroom Restaurant in Tabuyo del Monte, León

“I give thanks to the EU for its philosophy of opening up and connecting different territories”.



Patricia Maldonado
Hunting on Las Ensanchas Estate, Ciudad Real

“Natura 2000 is a good opportunity to encourage land owners to conserve their properties. The challenge is to turn Natura 2000 into an economic value”.





David Díaz
Traditional Livestock Farming in Parque Natural de Redes, Asturias

“If I get a kickback from being in a natural site, then I’m duty bound to help conserve it. The way forward for livestock farmers in protected natural sites is to stand out from the pack on the strength of sheer quality”.



Alexandre Cendón
Abella Lupa, Organic Beekeeping in Serra do Xurés, Ourense

“The government needs to bring the aims and purpose of Natura 2000 to wider notice. In our case it helps our product to stand out from the rest”.



Mikel Azcarate
Casa Jauregia: Livestock Farming, Organic Dairy and Agritourism in Anitz, Navarra

“Living in a protected natural site should come in useful for selling an organic product, a marketing plus. The trouble is, for this to work, people need to know beforehand what the Natura 2000 network is”.



Bernard Martí
Artisanal Dolphinfish Fishing, Mallorca

“If we work together and make joint decisions about marine resources we all come out winning, the sea itself and those who fish in it”.



David Pavón
La Restinga Marine Reserve, El Hierro

“The reserve, which served as the basis for Natura 2000 listing, is not an end in itself. It’s only a means of working towards sustainable fishing. Everything you do to the sea you do it yourself”.



Primitivo Pedrosa
Os Miñarzos Marine Reserve, A Coruña

“Before the reserve was set up, the mindset of most was: the sea doesn’t belong to anyone, so I’ll just pitch in and take what I want. Now most of us think the sea belongs to everyone and we’re duty bound to look after it”.



Jordi Sargatal
Trailblazing Campsites on the Coast of Girona

“Natura 2000 is still a young idea and I believe it will have a long future. To my mind it now needs to be equipped with a set of social and environmental indicators to help assess and reinforce it”.



Juan Miguel Montaner
Integrated farming in Bajo Vinalopó, Alicante

“We can sell more produce with the guarantee of quality giving being in a natural site. This means taking care of the future”.





SHEEP-HERDING IN ARALAR AND PRODUCTION OF QUESO DE MONTAÑA, GUIPÚZCOA

Site: Guipúzcoa

Activity: Raising latxa sheep and production of Queso de Montaña (upland cheese) with Idiazábal Appellation of Origin

Protection Scheme: SCI Aralar ES2120011

“Upland cheese tastes different; it’s creamier, more flavoursome, somehow different from lowland cheese”. Gerardo Garmendia, an Aralar shepherd, seems to be able to savour the cheese even as he talks about it. Gerardo lives in his caserío (farmstead) of Zaldibia in Guipúzcoa. On his farm, from November to April, he looks after 300 latxa sheep. When the upland pastures grass over in May Gerardo takes them up to the Sierra de Aralar until October.

Up in the mountains he milks them during May and June until the November-lambing sheep run out of milk. From the milk he makes the so-called queso de montaña or upland cheese, fattier and more natural than the cheese he makes down in the valley because the fresh pasturage, the free-ranging lifestyle of the herds and the upland peace and quiet all make the milk much tastier.

In the mountains Gerardo lives and sleeps in a shepherd’s hut called txabola and corrals the sheep every night in a sheep pen called borda or majada. When the sheep are no longer giving milk, by about early July, he comes down to his caserío every night and goes back up every morning to free his flock from the borda for the day. The pastureland and txabolas are communal; each shepherd pays a grazing fee of one-and-a-half euros per sheep and a further fee for using the txabola and borda.

His work still takes up many hours without being quite as time-consuming as it was a few years ago. Since 2010 he has had a mechanical milking room and a small cheese dairy in the borda. There he milks the sheep twice a day and keeps the milk in a 200-litre tank at 4°C. Next morning he makes the cheese from this milk and leaves it to mature in the special upland temperature and humidity conditions. This not only saves time; it also means the cheese is now actually made in the upland environment under optimum hygiene and safety conditions.



Gerardo and his son at his farmhouse.

Upland grazing and land management

Aralar and livestock farming, especially latxa sheep, have gone hand in hand for centuries. One third of Aralar is made up by upland grazing pastures. Their absence or uncontrolled increase would change the landscape and ecosystem drastically, and for this reason this territory has been included within the Natura 2000 network. Maintaining an economically and ecologically sustainable livestock farming activity is crucial. So much so that, in 2010, the Sociedad de Estudios Vascos (Basque Studies Society) drew up the Manual de Buenas Prácticas Ganaderas (Handbook of Good Livestock-Farming Practices) to ensure the conservation and improvement of the pastureland of the Sierra de Aralar and the Sierra de Aitzkorri. Suggested sustainable livestock-farming measures include shepherd control of the flock, maintenance of controlled free-range grazing to avoid overpasturing and the redileo system (mobile pens) to limit spontaneous herd movement. “Livestock herds have a positive impact on the environment. They keep pastureland open, favouring various species of wildlife, keep unwanted scrub growth down and fertilise plant growth with their droppings”.

Hence the importance of the milking room and cheese dairy. The project was the brainchild of Javier Jauregi, an expert from Etorlur, the erstwhile public society of the Provincial Council of Guipúzcoa. Javier saw that the sierra was gradually losing its shepherds, who were being replaced by owners of sheep herds that were left to roam the sierra at will without any control of their grazing area. “This made it difficult to manage the pastureland and the livestock farming itself. Sheep herds, with no control of their movements, tended to mingle and get mixed up; some areas were overgrazed and there were inevitable clashes between shepherds”.

The objective of the project was “to enable shepherds to pursue their traditional activity in the sierra. They have helped to create the landscape and their presence is a guarantee of tradition, culture and top-quality, natural products with a keen market take-up”.



Queso de montaña

Shepherds came to an agreement about the conditions under which this upland cheese must be made to be worthy of the appellation: “The herding system must be short- or long-range transhumance with the shepherd milking the sheep in situ and making the cheese in the txabola”, explains Javier.

This cheese is much coveted in the Basque Country for its flavour and authenticity. “Its sales outside the area are increasing, even reaching Madrid”, adds Gerardo.

EXTENSIVE LIVESTOCK FARMING AND ANTI-WOLF-PREDATION MEASURES, GUADALAJARA AND SEGOVIA

Owner: Juan Arenas

Site: Cantalojas, Guadalajara, Castilla-La Mancha

Activity: Livestock farming, 1000 sheep and 800 cows. 14 livestock guardian mastiffs

Protection Scheme: SCI and SPA Sierra de Ayllón ES0000164 and ES0000488, and SCI Sierra de Pela ES4240007

“No, there are no wolves hereabouts at the moment”. In his workaday jeep Juan Arenas drives up into the sierra every morning from his house in Cantalojas, keeping a watchful eye on the ground all the way. Hoof prints in the earth, droppings and several decades of experience enable him to find his flock of over one thousand sheep and a few goats that graze day and night in the countryside of pinewoods, pastureland and deciduous oakwoods hard by the beechwood reserve called Hayedo de Tejera Negra in Guadalajara. “How do I know they’re not here? Because the mastiffs are very calm and the sheep themselves are relaxed. When there are any wolves about you should see how worked up the mastiffs get, oof, barking nonstop. There’s no catching them napping I can tell you!”

When he gets to the flock, the guard dogs come out to welcome him, swishing their great tails regally. Juan brings them their food every day, juicy chunks of meat and bone. “Mastiffs have to be fed in the country, where the sheep flocks are grazing; they have to be brought up there from puppies”.

Juan’s two brothers and his father also live in Cantalojas. They all run this family business between them; it includes a butcher’s where they sell meat certified as coming from extensively farmed herds in Sierra Norte. Juan is at this moment also president of the Sociedad de Ganaderos de la Sierra Norte de Guadalajara (Society of Livestock Farmers of the Sierra Norte de Guadalajara). He’s a big character hereabouts. His passion for the land where he lives, his open and hospitable nature make him sought out by all sorts of people from wildlife scholars to nature photographers and even film makers. Open to any new experience,



Juan Arenas with two puppies.

Juan has travelled to Bosnia and India with international livestock NGOs to swap experiences with others.

The mastiffs keep the wolfs at bay

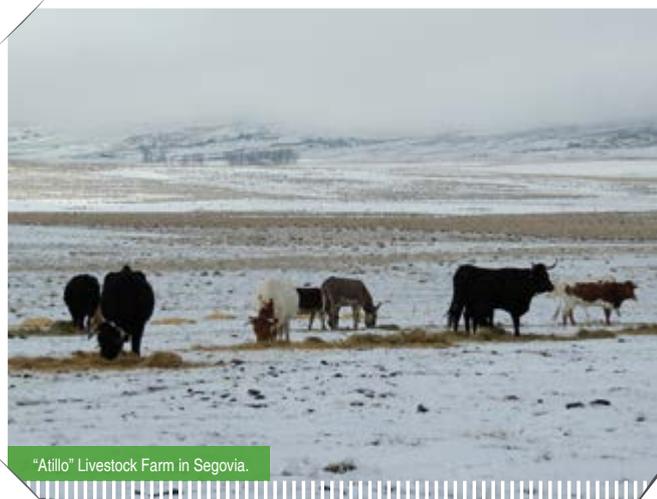
Wolves arrived in Cantalojas in 1996, killed a few sheep and disappeared. At that moment Juan acquired a few mastiffs and since then he has become smitten with these dogs and an expert handler. “Wolves reappeared in 2007, and now they are here to stay” predicts Juan Carlos Blanco, an expert in this animal that people tend to love or hate with no middle ground. “Juan Arenas is a fine example of good livestock management. Wolf attacks have to be forestalled beforehand with good prevention measures and mastiffs are one of the best”, he adds. Juan Arenas now has 14 mastiffs. “I was recently given a couple of puppies from north León... what wonderful dogs they are!”

Biologists radio-tracking a she-wolf in the area have found that its pack is roaming the grazing area of Juan’s sheep. In summer he takes them up into the mountains and in winter brings them down to Cantalojas and Villacadima, but they always sleep outside. “Every evening you have to check that no part of the flock has become separated from the rest, away from the protection of the mastiffs, but we suffer very little damage.”

Owner: Rafael Finat
Site: Campo Azálvaro, Segovia, Castilla y León
Activity: Livestock farming, 700 cows and fighting bulls
Protection Scheme: SPA and SCI Campo Azálvaro-Pinares de Peguerinos ES0000189 and ES4110097

“The wolf is really beautiful, a marvellous animal”. Many naturalists would certainly second this sentiment, but it is surprising to hear these words from a livestock farmer. Rafael Finat runs two farms adding up to nearly 1500 hectares on the high plains of Segovia. Here graze seven hundred cows, a mixture of pure-bred and cross-bred Avileñas. Rafael Finat eyes these treeless, gorse-clad, rock-strewn slopes with mixed feelings, torn between his passion for nature and his keenness for his livestock business. On his Atillo farm wolves killed 38 calves last year, out of a total herd of 600 cattle. “The livestock is insured, OK, but this is just not on. The government should compensate us for these losses. It’s not fair for livestock farmers to pay for the wolf alone.” When wolves settled in Campo Azálvaro, about halfway through the last decade, Rafael Finat was faced with a new thrill and a new headache at the same time. “That’s where I saw them for the first time, on that slope”, he says, pointing with his finger. “First I saw one and then I saw its mate a little further back”, he says, recalling this first stirring encounter. Then he frowns. “But you should see the damage a wolf does to game species. This represents a loss for the owner of the estate too”. Rafael has tried defending his calves with mules and is now thinking of using mastiffs as guard dogs. He dearly hopes he will be able to enjoy the sight of wolves in his beloved land without having to fork out for the damage done by this animal.

The SPA and SCI Campo Azálvaro-Pinares de Peguerinos boasts an abundant and singular birdlife, pride of place going the Spanish imperial eagle and carrion-eating raptors that depend on the livestock for their survival.



“Atillo” Livestock Farm in Segovia.

The European project LIFE Nature Project COEX LIFE04NAT/IT/000144, conducted from 2004 to 2008, showed that the use of electric fences and mastiffs greatly reduced wolf livestock predation.

BENEFITS OF SHEEP GRAZING IN UPPER ARAGON, HUESCA

Site: Escalona and Vió, Huesca, Aragon
Activity: Livestock farming, 800 sheep between father and son, managed on a short-distance transhumance basis
Produce: Sheep of the Churra Tensina race, bred for meat
Protection Scheme: SPA and SCI Ordesa y Monte Perdido ES0000016
www.grupopastores.coop

Alberto Fuertes is a 23-year-old who has decided to follow his father into the family trade of shepherd. His father himself, Miguel Ángel Fuertes, is 62 and still goes out into the fields, “though it’s pretty tough for him now at times because this work can be very hard”, Alberto points out. “Last summer we had three footslogging days on the trot looking for lost sheep. On the second day a mountain-top hailstorm almost did for him”, he says wryly.

This hailstorm episode is easier to understand if placed in its setting: the national nature park called Parque Nacional de Ordesa y Monte Perdido on the steep mountain slopes of the Huelva Pyrenees. For all his life, come summer, Miguel Ángel has taken his sheep flocks from the tiny village of Vió, next to Añisclo valley, up to the cooler upland pasture, “and you have to go walking because since it’s been declared a national park you can’t make any more tracks”, he rues. The shepherds have to go up to check on the flocks every ten days to make sure they are OK and to give them salt. “On more than one occasion we’ve had to go looking for them as far as the mountain refuge Refugio Góriz on the French border, a ten- to twelve-hour walk”, points out Alberto.

“Alberto’s case is not normal because the youngsters nowadays tend to look for easier work or switch to cattle farming, which is less time-consuming”, explains Feliciano Sesé, the 52-year-old mayor of Tella, a livestock farmer himself and also member of the Asociación de Ganaderos de Monteperdido (Monteperdido Livestock Farmers’ Association). Like the Fuertes family, Feliciano has churra tensina sheep, a native breed in danger of extinction, which has to be subsidised to offset its lower yield compared to foreign breeds. Though less productive, however, it is a much hardier breed, better adapted to the harsh mountain climate.

Another reason why people are dropping out of this business is the rising flock maintenance cost. Reminiscing, Feliciano tells us “when I was 15 my whole family lived off 200 sheep; this would be impossible nowadays because the fodder price has soared while the final meat price doesn’t shift”.



Alberto Fuertes.

Oviaragón, a cooperative to save the shepherds of Aragon

In 1981 17 livestock farmers came together to form the cooperative Carnes de Aragón (Meat of Aragon). Several mergers later this has now become the Oviaragón-Grupo Pastores, made up by over two thousand shepherds from the whole region and bordering municipalities of neighbouring regions. The cooperative takes care of distributing all its members’ meat. “It’s true it finds an outlet for the lot” say Miguel Ángel and Alberto Fuertes. “We sell about 600 to 700 lambs a year”.

Oviaragón has won several plaudits for its social-responsibility policy. The cooperative sees to furnishing all its members with products, insurance, veterinary assistance and all-round consultancy and advice. Even so, the shepherd trade in Aragon is obviously declining, losing about 300 shepherds a year for the last seven, “though the drop-out rate within the cooperative is 20% less than outside”, puts in a group spokesperson.

In 1989 Oviaragón obtained registration under the Protected Geographical Indication scheme Ternasco de Aragón recognised by the European Union as high quality meat with natural qualities. Today it is Spain’s best seller.

For all their ongoing efforts the livestock farmers of Upper Aragon still have to top up their income elsewhere. Both the Fuertes family and Feliciano Sesé run country cottages, and the park itself “gives many of us temporary employment on maintenance work”, says Feliciano, who is utterly convinced of the advantages of Natura 2000. “I see it as a great stroke of luck that our sheep have got free top-quality food during the summer months”.



20% of the Spanish territory is dependent grasslands of ranching and are recognized as priority habitat of the Natura 2000 network.

Sheep, crucial for conservation of the Natura 2000 network

“Of course the disappearance of sheep affects Natura 2000!” declares Juan Antonio Gil, president of the Fundación para la Conservación del Quebrantahuesos (Lammergeier Conservation Foundation). “It’s a proven fact that cows and sheep graze in different ways. Sheep look for more nutritional plants and can graze higher up, reaching 2400 metres at times, while cows stay below 1800. They’re complementary and both necessary. Here there are sheep-dependent plant- and animal-communities”.

For years now the Foundation has been working towards an alliance with livestock farmers to protect and boost one of Spain’s flagship species, the lammergeier. This bone-eating vulture depends largely on animal deaths in the mountains, including livestock. This is why a meat quality mark has been created. “It’s a way of bringing home to society the benefits of supporting our many animal herders as a way of preventing forest fires, protecting soil from erosion and even helping to keep our streams and rivers clean. Society needs to be much more aware of the importance and benefits of maintaining traditional livestock farming”.

www.quebrantahuesos.org

TRADITIONAL LIVESTOCK FARMING IN PARQUE NATURAL DE REDES, ASTURIAS

Owner: David Díaz
Site: La Felguerina, Caso, Asturias
Activity: Extensive livestock farming
Area: 30 hectares
Protection Scheme: SPA and SCI of Redes ES1200008.

David Díaz lives in La Felguerina, a hamlet of twenty five residents lying right in the middle of Redes, one of Spain's most stunning reserves with thickly wooded valleys patchworked with scrub and meadows and high-mountain pastureland soaring up to craggy peaks. His herd totals fifty cows and calves of the Asturian mountain cattle "casina" breed. "And no more than fifty because that's all I can accommodate in the 30-hectare meadow I inherited from my father". Since time immemorial the sustainable livestock farming methods in this nature site have managed to strike the right balance between animal farming and wildlife conservation. It is also the main livelihood of the local population, living in two Asturian concejos (wards): Caso and Sobrescobio.

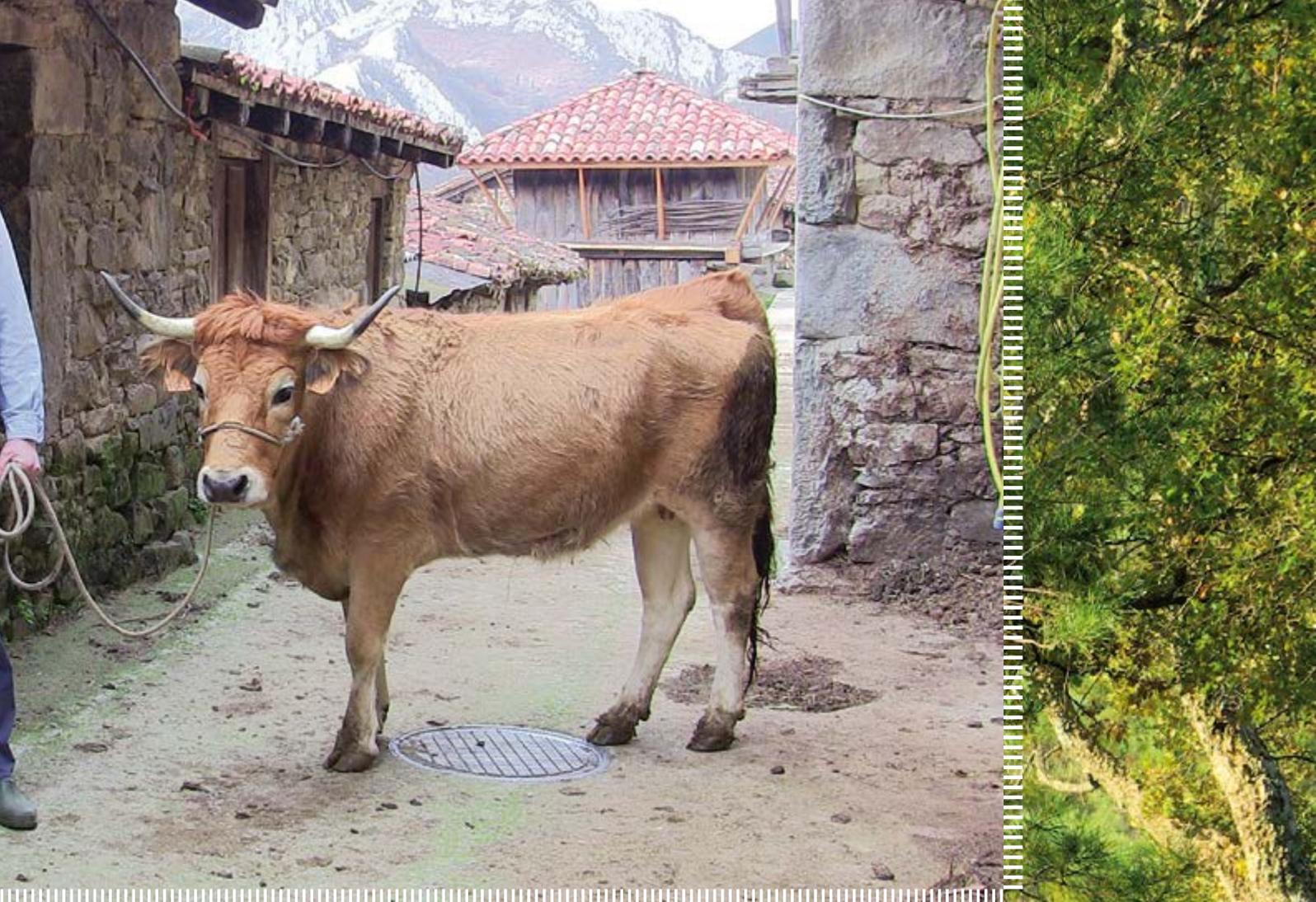
But what should we understand by sustainable livestock farming? "What else? In tune with the land and seasons, natural, just as we've always done round here" says David expressively, with the wisdom that comes from an inherited stock of Asturian mountain cows. Since time out of mind the traditional livestock farmers have lived and worked by the natural seasons, stabling the cattle in winter or keeping them on lowland pastures and then taking them up in spring to the upland byres and communal pastureland. "My cows and calves graze in natural meadows fertilised only with their own cucho (manure). No chemicals are used". This sort of grazing stimulates plant growth on the manure-fertilised meadows and helps to scatter the seeds.



David with one of his casinas cows. In the late eighties the number of casinas dipped below 400.

A second key element is the livestock load, i.e. the number of animals a given area of pastureland can withstand without losing its natural richness. In Caso this load is hardly one third of the maximum eligibility threshold for receiving agri-environmental aid. "If I get a kickback from being in a natural site, then I'm duty bound to help conserve it" affirms David while showing the document specifying the sum of money he receives for a livestock farm within the Natura 2000 network.

Raising only native breeds of cattle is another of the surest and most appreciated ways of conserving the local environment. The Asturian mountain breed, called "casina" hereabouts precisely due to the nearby village of Caso, is a hardy animal adapted to the harsh mountain climate and its meat is recognised for the fat level in the muscle. An excellent mother, this breed is also a robust draught animal for work in the countryside. In the late eighties the number of casinas dipped below 400. It was fast being ousted by foreign breeds like the Friesian and Parda Alpina, more profitable for the industrial market. Nowadays the casina breed is subsidised.



Quality is the way forward for livestock farming in natural sites

David is absolutely convinced that the way forward for livestock farmers in protected natural sites is to stand out from the pack on the strength of sheer quality. That is why his calves always remain with their mothers even after being weaned and if they need to be fed he uses organic fodder. “Only ten percent of calves born in Asturias are lucky enough to enjoy this top-quality lifestyle. For me they’re like people. But I’m just a big softy”.

It is now a proven fact that some level of grazing is necessary to conserve plantlife in Natura 2000 sites. For this reason the town council of Caso has recently set up the project Recuperación y Mantenimiento de Majadas, una Apuesta por la Sostenibilidad en Caso (Restoration and Maintenance of Upland Byres; Working Towards Sustainability in Caso).

www.lasmajadasdecaso.com

Redes still boasts some of the flagship species of the Cantabrian mountains, such as the capercaillie, golden eagle, Egyptian vulture, brown bear, wolf, chamois and roe deer.

ABELLA LUPA, ORGANIC BEEKEEPING IN SERRA DO XURÉS, OURENSE

Members: Alexandre Cendón, Rita Soler, Alberte Reboreda and Jesús de la Fuente

Site: Beehives in Serra do Suído, Covelo, Pontevedra, Galicia. In summer some are moved to Serra do Xurés, Ourense

Activity: Organic honey-making. Recovery of ethnographic beekeeping-related heritage and bringing it to wider notice. Beekeeping courses

Production: 5000 kilos of honey a year

Protection Scheme: SCI Baixa Limia ES 1130001 and SPA Baixa Limia-Serra do Xurés ES0000376

www.abellalupa.es

Alexandre's life was pretty much wrapped up in his philosophy classes when a friend asked him to look after his three beehives while he went seeking his fortune in other lands. Alexandre knew absolutely nothing about beekeeping but he still took it on. This decision taken 20 years ago changed his life for ever. "I became hooked on bees watching them work away nonstop. And that's where our firm's slogan comes from: Bees working for biodiversity and rural heritage".

Abella Lupa was born in 2010 as a Sociedad Agraria de Transformación (Agrarian Processing and Marketing Association). It is made up by two forestry experts, a biologist and a philosopher, Alexandre Cendón, who is president of the association and takes charge of the field work. "The fact that we come from such different fields has come in really handy for planning other work besides the honey-making, such as restoring the Paraños wax press in Covelo or drawing up a guide to the beeswax trade" explains Cendón.

The results have been so good that after only two years of trading Abella Lupa won first prize in the Red Empreverde (Green Entrepreneurship Network), awarded by the Fundación Biodiversidad (Biodiversity Foundation).

Its two hundred hives are kept in Covelo in the Serra do Suído, a site proposed as a Site of Community Interest (SCI) to form part of the Natura 2000 network. In the surrounding countryside the bees collect their nectar from gorse, broom and brambles, "a type of vegetation that is



Spain, with 34,000 tons, is Europe's biggest honey producer. Even so the whole sector accounts for less than one percent of its total farming sector.

vastly underestimated and yet plays a key ecological role", affirms Cendón. Every summer they take fifty of these hives to Calvos de Randín in the Serra do Xurés of Ourense, an area that falls within the SCI Baixa Limia and the Special Protection Area (SPA) Baixa Limia-Serra do Xurés. There the bees collect above all oak honeydew, a sugary acorn secretion. "This enables us to vary and increase our honey production. Our whole production is organic; this means the hives must have no contaminating source within a three kilometre radius, such as high roads, factories or conventional arable land".

The Abella Lupa crew are quite clear about the factors that play in their favour: honey is a high-demand product; Spanish honey is top quality; the organic farming method gives them a plus that goes down very well with their clientele. "We sell to specialist shops, consumer groups. Our direct sales chip in with a third of the total".

The figures vouch for this business opportunity: in 2013 alone organic beekeeping grew by 30% in Galicia. For Alexandre Cendón, however, this opportunity goes well beyond the economic implications. It enables him to live in his home town and not have to emigrate like so many of his peers, like the friend who left him in charge of three fascinating beehives 20 years back.

The biodiversity index of the SCI Baixa Limia and the SPA Baixa Limia-Serra do Xurés is nearly double that of Galicia as a whole and of European countries like Germany, Portugal or the UK.



SIERRA DEL HOYO BEE MUSEUM, MADRID

Site: Hoyo de Manzanares, Madrid

Activities: Bee museum and classroom, themed trail, didactic beehive, farm and orchard

Area: 264 hectares

Protection Scheme: SCI Cuenca del Río Manzanares, ES3110004

www.aulaapicolahoyo.com

“The childhood memory of the smell of honey in my house of La Ladera often comes flooding back to me. I remember looking out for my dad to come home with the teeming panels while my mother, aunts and my grandmother got everything ready for extracting the honey. It was always a great thrill when they let me turn the handle.” Nacho Morando relives his feelings of nearly 40 years ago. That tradition has now been channelled into the Aula Apícola Sierra de Hoyo (Sierra del Hoyo Bee Museum).

La Ladera y Picazos is the name of his family's 264-hectare estate, which runs up the hillside amidst holm oaks and cork oaks behind Hoyo de Manzanares, a town lying 39 kilometres from the city of Madrid. It is one of the favourite areas for weekend outings from the city. “The biggest problem,” stresses Nacho, “is the estate's very proximity to Madrid and the enormous social pressure this brings. The estate's great ecological value stems from its role as a natural corridor running from the Monte de El Pardo, a woodland area on the edge of Madrid, to the mountain range Sierra de Guadarrama. Its priceless plant and animal life includes such gems as the Spanish imperial eagle, a bird that shuns human crowds and noise”. The estate is worthy of protection under three different schemes: nature reserve, Site of Community Importance (SCI) and Biosphere Reserve; this obliges its owners to draw up and observe a management plan. “The estate's top-priority use is conservation”, stresses Nacho; “anything else has to fit in with this overarching principle”. Hunting is limited to wild boar, but only as population control. Other allowable uses boil down to scientific research, education, beekeeping and cork stripping.



Model Management

The Association of Forestry Owners of Madrid Region (Asociación de Propietarios Forestales de la Comunidad de Madrid: ASFOCAM) sees this Aula Apícola as a shining example of how to run and boost an unproductive woodland area. It proves the compatibility of the use with all environmental legislation and also highlights its educational value and job-creation potential.

Far from being daunted by these limitations, the owners have always shown a great sensitivity and commitment to the conservation of this site. Measures taken along these lines include collaboration agreements with scientific organisations to improve the environment, drawing up a fire-protection plan recognised by the silviculture sector and offering educational alternatives to avoid the untoward impact of mass tourism.

The star turn here is the Aula Apícola, the Bee Museum and Classroom created by Nacho Morando and Clara Núñez after reaching an agreement with the rest of the owners. Its exhibit and facilities include a bottling room, an ecological trail, a didactic beehive and a display of traditional beekeeping instruments from around the world. It was the first museum/classroom of its type in the region of Madrid. Activities are put on for school visits and also individuals. "The kids feel different wearing a beekeeping suit. Most of them have never even seen a beehive in their lives before", says Clara, responsible for running the Aula Apícola.

The museum/classroom, meeting all bioclimatic building criteria, has been set up in an old farmstead.



CASA JAUREGIA: LIVESTOCK FARMING, ORGANIC DAIRY AND AGRITOURISM IN ANITZ, NAVARRA

Site: Anitz, Navarra

Activities: Organic livestock farming, production of milk, cheese, yoghurt and milk shakes, rural accommodation establishment and livestock education days

Protection Scheme: SCI Belate ES2200018

www.jauregia.es

Changing from a farm of 50 stabled Friesians to an organic farm of 22 cows is no easy decision. It has to be thought long and hard. The necessary spadework involves lots of number crunching, many visits to livestock farms that have taken the same decision and thoroughgoing gleaning of all available information on pasturage, veterinary treatment, milk production and, in the case of Casa Jauregia, transformation of the milk into dairy products like soft cheese, yoghourts and milk shakes. This far-reaching change was successfully negotiated by the Azcarate family in Anitz over several years.

“We used to have fifty cows that generated two jobs and now we have twenty two that generate four and a half jobs. The secret of success lies in a lower cost in veterinary bills, medicines, chemical fertiliser and fodder and also in the transformation of the milk into dairy products, which is where the profit lies”, explains Mikel, the elder brother.

Their decision of changing over to organic farming had nothing to do with the fact of living on a Natura 2000 site. “Living in a protected natural site should come in useful for selling an organic product, a marketing plus. The trouble is, for this to work, people need to know beforehand what the Natura 2000 network is. I don’t reckon they’ll impose from without any more conditions than we’ve already imposed on ourselves from within from sheer conviction”.

Necessity is so often the mother of invention. When his brother Aitor finished his studies in 2003 and decided to come back to Anitz, the family did the sums and came to the conclusion that bringing in another 30 cows would not be profitable. In 2004, with the help of the Navarre Government, they decided to invest in new dairy facilities.

Jauregia in the Basque language means mansion. This has been the family’s ancestral home for the last 400 years and now it has been turned into a country cottage.



Fewer cows means a better conserved ecosystem

In 2008 they installed Elizondo's first ever fresh milk dispenser; in 2010 they obtained organic production certification. By then they were transforming their whole milk production into dairy products.

"Beforehand we had 2 cows per hectare; now, with organic farming, we have 0.7 cows per hectare. We're almost self-sufficient and don't need any more grass. Fewer cows on the same plot of land means less slurry, in other words a better kept farm".

No chemical fertilisers at all are used on the grazing meadow, or "larre" or "belai" as it is called in Valle del Baztán, so the pasturage yield is lower than the average figure for Navarre, but they need no more and the land suffers less. "We use no herbicides and do everything by hand. It is not the custom in Navarre to reseed the meadows but we grow rye and alfalfa. Legumes nitrogenise the soil. We've also brought back crop rotation; we've gone back to basics." As natural fertiliser they use their cow slurry mixed with cheese-making whey.

They know cows should eat grass "no higher than 20 centimetres; any higher and it loses proteins". Last year they had the cows grazing for six months and this year they aim at seven. More time eating fresh grass equals lower production costs.

Looked after like this, the cows produce an average of 20 litres of milk a day, whereas stabled cows in Navarre churn out an average of 34 litres. But Mikel and Aitor have found that to make 9 tons of cheese they need 90,000 litres of milk and that 10 cows equal one job. "We don't want to get caught up in that vicious circle: more cows, more sales, more work. We've learnt from bitter experience that exclusively fodder-fed cows were sickly and calved less, and the milk didn't curdle properly. Organic farming lengthens their life to eight years and they give us a creamier, tastier milk of better quality for making our cheese and yoghourts", comments Mikel.

At present they are selling 40% of their output in the local area and the remaining 60% in Pamplona, to consumer groups. "On organic principles we prefer to sell only in the valley, as close by as possible. We also prefer to have a direct relationship with the consumer, now accounting for 50% of our sales. We're not interested in supermarket sales".

EL COLLETERO, WOMEN OF NALDA, LA RIOJA

Name: Huertas del Iregua

Site: Nalda, La Rioja

Projects: Restoration of abandoned market gardens and fight against climate change

Activity: Organic farming, creation of consumer's club, reforestation and social services

Area: 30,000 m² of market gardens. 80,000 m² of reforested area

Protection Scheme: SCI Peñas de Iregua, Leza y Jubera ES0000064

www.elcolletero.org

Raquel, Ana, Fabiola, Marian, Naiara and Merche explain things in the same eager way they work, leaving no stone unturned. They have a lot to talk about too, because these women have been working nonstop for the last few years: one minute they might be sowing the vegetable beds; the next, looking after elderly people in their homes; preparing a basket with organic farm produce for the consumer's club; organising agroforestry courses for youngsters; kicking off a new reforestation project or setting up a toy library to help working parents. Optimistic and tireless, they regard their project as very social in essence. "We're a community and encourage the whole society to take part", comments Raquel Ramírez, one of the promoters.

They have created eleven permanent jobs between the association "El Colletero, las Huertas del Iregua" and the two cooperatives they have set up: "Mar del Iregua", offering neighbourhood services and "Nalda Cop XXI", offering childcare services.

The market-garden restoration project began in 2009 with a request for permission to work on 30,000 m² of abandoned market gardens around Nalda. This initiative had both an economic and emotional component. "Speculative development and abandonment of the land between them were putting paid to part of our local culture and roots. It wasn't just a question of the market gardens and their economic value but rather the sadness of seeing them abandoned. This initial restoration project encouraged others to plant up their land anew. The change of scenery has changed our mood", puts in Raquel. "It's worked because we're deeply rooted in this land ourselves; we feel ourselves to be part of the land"



Every week volunteers help to fill the hundred baskets of the consumers' club.



Raquel and Ana chatting with Nalda residents. The experience of local farmers is enshrined in the biocultural memory.

pe and we're full of hope", says Fabiola simply.

Mindful of living in a Natura 2000 site, they were sure right from the start that organic farming was the way to go. Fabiola and Raquel pipe up in stereo, "we believe in food sovereignty in environment-friendly production and we want to cut down the use of phytosanitary products choking our land and seeping into our rivers".

Every week the volunteers fill up baskets for the one hundred clients of the consumer's club that make this whole project economically viable. These baskets include the seasonal produce of the organic market gardens and are topped up with produce from the traditional market gardens. "If we want to promote organic farming, we can't afford to create a conflict between traditional and organic produce, when both come from the market gardens of Nalda," argues Fabiola.

Most of the baskets are distributed in Logroño, less than 20 kilometres away, and a dozen or so in Nalda itself. They cost 13 euros. Ana points out that "the purchasers value the guarantee of the product's origin, its quality and also the fact that it generates employment and is produced very close to home".

A biocultural memory

Naiara interviewed all the elderly farmers round about and noted down all the traditional, environment-friendly methods of the past. It is a forward-looking revival of past best practices. “We have passed from a medieval agriculture to another exclusively profit-driven farming system that has lost touch with processes and natural rhythms. The idea is to recover all the good points of traditional agriculture and adapt them to our times”, comments Raquel.

And all this within the Natura 2000 network. “It holds no fear for us at all. On the contrary, we advertise it on our baskets, although it’s sometimes raises eyebrows because people don’t yet know what it is or what it’s for. In our case we hope it becomes a brand to protect our market gardens from speculation and vested interests who are looking for gas below our land. We need to lever Natura 2000 to prevent this”, explains Raquel. Marian, head of the reforestation project, rounds out the idea: “Natura 2000 reinforces our message of commitment to our land and the beings that live on it. It should give an added value to all the produce grown here. It should bring out the value of the people who work here, supporting processes. This means that human beings have to live within the network, managing and working the land”.

Planters of dreams

Between the steeping crags of the Iregua and Lezarivers, smack in the middle of a Natura 2000 site, the women of Nalda have initiated a project to fight against climate change by reforesting 80,000 m2 of land.

They plant mycorrhizals aplings of holm oaks and Portuguese oaks with an intermingling of deciduous oak and junipers to build up a timber-producing woodland in the medium term.

They work with a 150,000 euro budget and an 80% grant from LEADER funds. The trees are funded by selling individual rights to name a tree. Fabiola tells us they are creating “the wood of trees with names. The emotional charge is sometimes overwhelming because many of these trees now have a really moving story behind them. They are gifts to loved ones to commemorate particular events or reminders of red-letter dates. We call them the planters of dreams”.



The agroecology courses organized each year are seedbeds of new farmers and a source of funds for the association and its project.

VINEYARDS IN A NATURAL SETTING IN NOJA, CANTABRIA

Owners: Durán and Rebate families

Site: Noja, Cantabria

Activity: Vineyards, winery and oenotourism

Area: 10 hectares, 3 hectares within Natura 2000

Protection Scheme: SPA Marismas de Santoña, Victoria y Joyel y Ría de Ajo ES0000143

www.cantabricus.es

“They told us we were crazy; they said planting vineyards in Cantabria would be a disaster and advised us to sell the land for house building”. The memory comes from Begoña, one of the owners of the winery called Bodegas Vidular together with an emerald green vineyard. It is a modest-sized vineyard, just over one hectare, ringed by a moss-cloaked dry stone wall and a holm-oak copse and scrub. A long shot from the huge vineyards on the Castilian meseta.

Despite the dire warnings, Bodegas Vidular “is going from strength to strength” turning out twenty five thousand bottles of wine a year. It is a family firm that began trading in 1999 when two families fused their strengths. The Durán family’s input was Mikel’s wine distribution firm plus the skills and expertise of his brother John acquired in a French winery plus the oenological knowledge of the father of both. Begoña, for her part, came up with the land and a sound knowledge of English and chemistry, which she topped up afterwards by specialising in oenology.



Vidular owners.

The vine cultivars are of the Chardonnay, Treixadura and Albariño varieties, producing wines “ideally blending in with the local cuisine of fish and seafood”, in the words of Mikel. One of their wines won a special mention in the Madrid Fusión competition.

The business as a whole has ten hectares of vines, three of which lie on the outskirts of the town of Noja within the Special Protection Area (SPA) Marismas de Santoña, Victoria y Joyel y Ría de Ajo, one of Spain’s most important water-bird wintering areas, doubling up as a busy seaside resort in summer.

“At first we didn’t even know we were inside an area protected by the European Union, but when we found out, we were delighted because we’ve always loved the countryside and our outlook is to grow things in the most natural and organic way possible”, explains Jon. “We don’t use herbicides; we control weed growth with a geotextile mesh instead. We also avoid fungicides as far as possible though we do sometimes have to use them sparingly in years of very high rainfall”.



But these entrepreneurs have also been shrewd enough to harness the commercial advantages of this circumstance: “We asked the Government of Cantabria for permission to use the nature-park logo on the bottle labels and it went down very well”, says Mikel. “They’ve told us since they’re now looking into the possibility of an official seal for production in their nature parks”.

The dreams of Vidular’s owners go still further: “We would like to set up an information centre on wine and the vineyard and offer another type of tourism to round out the traditional seaside-resort idea”, explains Begoña. “This plot is an inheritance from my grandfather Marcial who made his fortune as a seafaring man at the start of the century. If he only knew”.



The owners have turned an old country house into a rural-accommodation establishment set among vineyards, offering menus of choice dishes washed down with their wines.

VINES AND BIRDS ON THE BANKS OF THE RIVER DUERO, VALLADOLID

Owners: Alonso Family

Site: Torrecilla de la Abadesa, Valladolid, Castilla y León

Activity: Grape growing using the varieties Verdejo, Viura and Sauvignon Blanc. Rueda Appellation of Origin

Area: 135 hectares

Protection Scheme: SCI and SPA Riberas de Castronuño ES4180017

www.copaboca.com

There is a before and after in the vineyard of the Alonso-Galindo family, a five-generation line of wine producers. This watershed moment came when Felipe and his wife Charo cottoned on to the gilt-edged chance of offering a quality product endorsed up by a marquee nature site, the land their vineyards had grown on for decades. This land, lying on the banks of the River Duero, is called Ribera de Castronuño and today it has been listed as a Site of Community Interest (SCI) and Special Protection Area (SPA) for birds.

This was back in 2008 and the original idea was largely the brainchild of Santiago Enciso, economist, friend and now one of the managers of the winery Bodegas Copaboca. "We are one of the only two vineyards growing within a nature reserve in the whole of Castilla y León. This makes us special; contrary to what others may think, our being in a protected nature site is a plus" says Santiago forthrightly.

Time soon proved his hunch to be spot on. After only four years up and running Copaboca is already a success story in terms of the quality of its product and the sound market footing. Every year the winery produces three hundred thousand bottles of its own brand and also bottles wine of



Felipe and Charo, Bodegas Copaboca owners.

other top-quality brands. It sells to 22 countries, and its staff, now ten-strong, is continually growing.

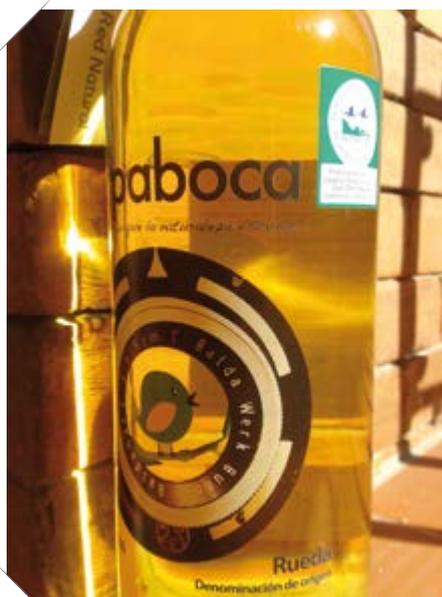
A good part of this success can be put down to "our pledge to the environment. We use no herbicides, synthetic fertiliser or fungicides. We keep a watchful eye on the vines and their growth, day by day". The conviction that lies behind his pledge is obvious. Quite apart from the environment-friendly management of the vineyard, Copaboca earmarks 2% of its profits for local environment-conservation organisations.

Santiago calls himself a "keen birder". He confesses that he sometimes "slips away" from the information centre at lunchtime. "They've set up a web cam on the banks of the Duero and it's a real spectacle". This hobby has given him an insight into the way nature works here. He has observed that a healthy population of raptors hereabouts helps to "keep at bay" all the berry-eating birds that see grapes as an irresistible titbit. "If a booted eagle is soaring overhead the small birds don't dare enter. It stands to reason". Now they are looking into a system to stop the birds from flying into the vine-training espalier wires in winter when they are bare of vegetation and less visible



A Natura 2000 site with many uses

The vineyard and wineries stand in an area of unirrigated farming alongside cereal fields where great bustards are often seen. But to get there from the Torrecilla-Villalar road you have to take a track that runs through a sizeable pinewood called Pinar de Bayona, also falling within the SCI together with the dehesa where the livestock graze. The vineyard lies one kilometre from the Duero itself, which knits together the whole reserve. The river, thronged by black- and white-poplars and ash trees, is impressively wide as it flows off towards Zamora. No less impressive is the wildlife it harbours in such a built-up area, with nearly 200 species of birds and over 20 mammals.



Copaboca is the only vineyard and winery endorsed by SEO/BirdLife's EU-authorized Natura 2000 seal.



ORGANIC MARKET GARDENS IN SOTO DEL GRILLO, RIVAS VACIAMADRID

Site: Rivas Vaciamadrid, Madrid

Activity: Growing and marketing organic produce

Protection Scheme: SPA Cortados y Cantiles de los ríos Jarama y Manzanares ES0000142 and SCI Vegas, cuestras y páramos del sureste de Madrid ES3110006

“Besana” is the Spanish word for the first furrow made when ploughing the land and is also the name chosen by María, Jesús Fronce, José Luis García and Úrsula López for Madrid’s first ever producer-consumer cooperative of agroecological produce.

In Rivas Vaciamadrid the coop runs a shop of organic-products grown on council-loaned land in the spot called Soto delGrillo hard by the River Jarama.

Theirs is one of the sixteen organic farming projects set up by this local council, ensconced right in the middle of Madrid’s Southeast Regional Nature Park (Parque Regional del Sureste en la Comunidad de Madrid).

The council has loaned two hectares of land for a five-year extendable term to each selected project. The concessionaires are then duty bound to produce organic vegetables, pulses and fruit to supply the population of Rivas and sell them on Madrid’s commercial organic-produce market. The setting up of these market gardens has helped to restore a scenery that had been lost in recent years and also to regenerate the bankside vegetation of the River Jarama, home to coots, ducks, herons, little bitterns and a long list of other bird species that have earned it Special Protection Area (SPA) status and made it a honeypot for birders.

The demand for agroecological produce is increasing

Organic-farming demand and supply has increased in recent years, although producers still have many hurdles to surmount: lack of public awareness, dearth of suitable distribution outlets and red tape. They also have to sort out many internal problems such as ensuring production stability and completing productive cycles by supplying finished as well as fresh products. Besana has just bought a cold storage room and dehydrator to be able to sell summer’s surplus produce during the rest of the year. Their cooperative is made up by consumers, who pay an entrance fee and have voting rights at the general assembly. At these meetings they decide on quotas, discounts, investments and draw up the activity plan for the following year. The last assembly approved creation of the “besanito”, an internal currency allowing farming work or collaboration to be traded off against shop produce.

Workers and volunteers of the Fundación Juan XXIII project.





A crop for each project

Each of the sixteen 2-hectare plots loaned by Rivas Council had to grow a different product from the rest to be eligible for approval in the overall scheme. In these 32 hectares there is a long and varied list of seasonal vegetables, pulses, fruit, aromatic herbs and even alfalfa for livestock fodder.



María Jesús, Jose Luis and Úrsula in their Rivas Vaciamadrid shop.

The market gardens and shop between them provide jobs for the three founder members.

A quality product in search of a principled purchaser

To all the criticism about the high price of organic produce María Jesús answers with her own question: “How much is confidence in your children’s food worth?”

“Any one of these tomatoes,” says Úrsula pointing to a box in her shop, “would be worth double in a gourmet shop. You don’t pay only for quality; you also pay a fair price, which can hardly be compared with the market prices of industrial producers”. Hers is local produce looking for local consumers: “We are seeking principled, right-thinking consumers who live close by, aiming to set up a direct relationship with them to cut down the cost of distributors, middlemen and transport”. These guiding principles are shared by most organic producers, such as the Fundación Juan XIII, another of the 2-hectare concessionaires, which also has another social objective: occupational integration of people with an intellectual disability. The foundation employs eight people in its project, six of them

with some sort of disability. These jobs include farmwork, running a marketing website, cleaning and preparing produce and making baskets for sale. At the head of the project is Thais, an agronomist: “Our project blends social commitments with organic and environment principles. The project is obviously economically viable otherwise we couldn’t ever have got this far, but the truth is it depends totally on our effort: we plant the seeds, pick the produce, process the food and market it directly”.

The wildlife that won this area inclusion in Natura 2000 roams the fields of Soto del Grillo looking for invertebrates to eat. They won’t have to look far or long. Here no poisons are put down to kill off these invertebrates or unwanted weeds. “Living in a protected area means you’re faced with some limitations such as fencing, toolsheds or greenhouses, etc, which you might not have to bother with in other spots. But endorsement of the Natura 2000 seal can boost the value of our produce and the pros outweigh the cons”, explains Úrsula.

INTEGRATED FARMING IN BAJO VINALOPÓ, ALICANTE

Name: Carrizales

Site: BajoVinalopó, Alicante

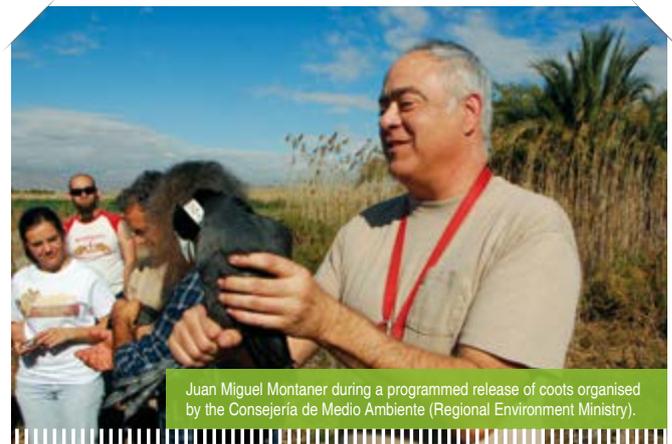
Activity: Comunidad de Regantes de Carrizales (Carrizales Irrigation Association). Cooperative of six farmers growing melons and pomegranates on an integrated farming basis

Protection Scheme: Corridor between the SPA and SCI El Fondo de Elx-Crevillent ES0000058 and the SPA and SCI Salinas de Santa Pola ES0000120

www.carrizales.es

The cooperative Juan Miguel belongs to sells its melons at 1 euro a kilo as compared with the average price of 20 euro cents paid by wholesalers. What's the secret? "Our melons are sweet and crunchy thanks to the qualities of the land and they are grown in an area surrounded by nature sites. This is what more and more consumers are after. And this is exactly what the Carrizales label offers". In fact the Carrizales melon is riding a boom. So much so that "we sell off our two-hundred thousand kilo output too quickly" says Juan Miguel, tongue firmly in cheek.

Juan Miguel forms part of a six-farmer, melon- and pomegranate-growing cooperative that is exploring new paths for the Comunidad de Regantes de Los Carrizales. It is now farming on an integrated basis but hopes to go organic soon. Juan Miguel has been vice president of the Comunidad de Regantes, a group of farmers occupying between them 1300 hectares of arable land and another 300 of wetland, right in the middle of two Natura 2000 sites, the lake called Laguna de El Hondo and the saltbeds called Salinas de Santa Pola. This association of 400 landowners has asked the Generalitat Valenciana (Valencia regional government) for inclusion within the Natura 2000 network. Why?



Juan Miguel Montaner during a programmed release of coots organised by the Consejería de Medio Ambiente (Regional Environment Ministry).



The uncovered ditches and channels of Juan Miguel's farm help to conserve natural vegetation as a wildlife refuge.

El Hondo is Valencia region's second most important wetland after the Albufera de Valencia. It is the stronghold of marbled teal and one of Spain's three flamingo breeding sites. It boasts rare salt-loving plants that can grow only on its salty soil. A 2004 count conducted by the Association of Friends of the Wetlands of Southern Alicante (Asociación de Amigos de los Humedales del Sur de Alicante: AHSA) found 164 bird species in the arable zone. The recovery of the two lakes has probably boosted the number of species to 200.

We want to belong to the Natura 2000 network because it is a guarantee of quality

Juan Miguel gives a straight answer when asked if this interest has got anything to do with the agri-environmental aid: “the aid comes in handy without any doubt but what we really want to show is that we can sell more produce with this guarantee of quality. This means taking care of the future”.

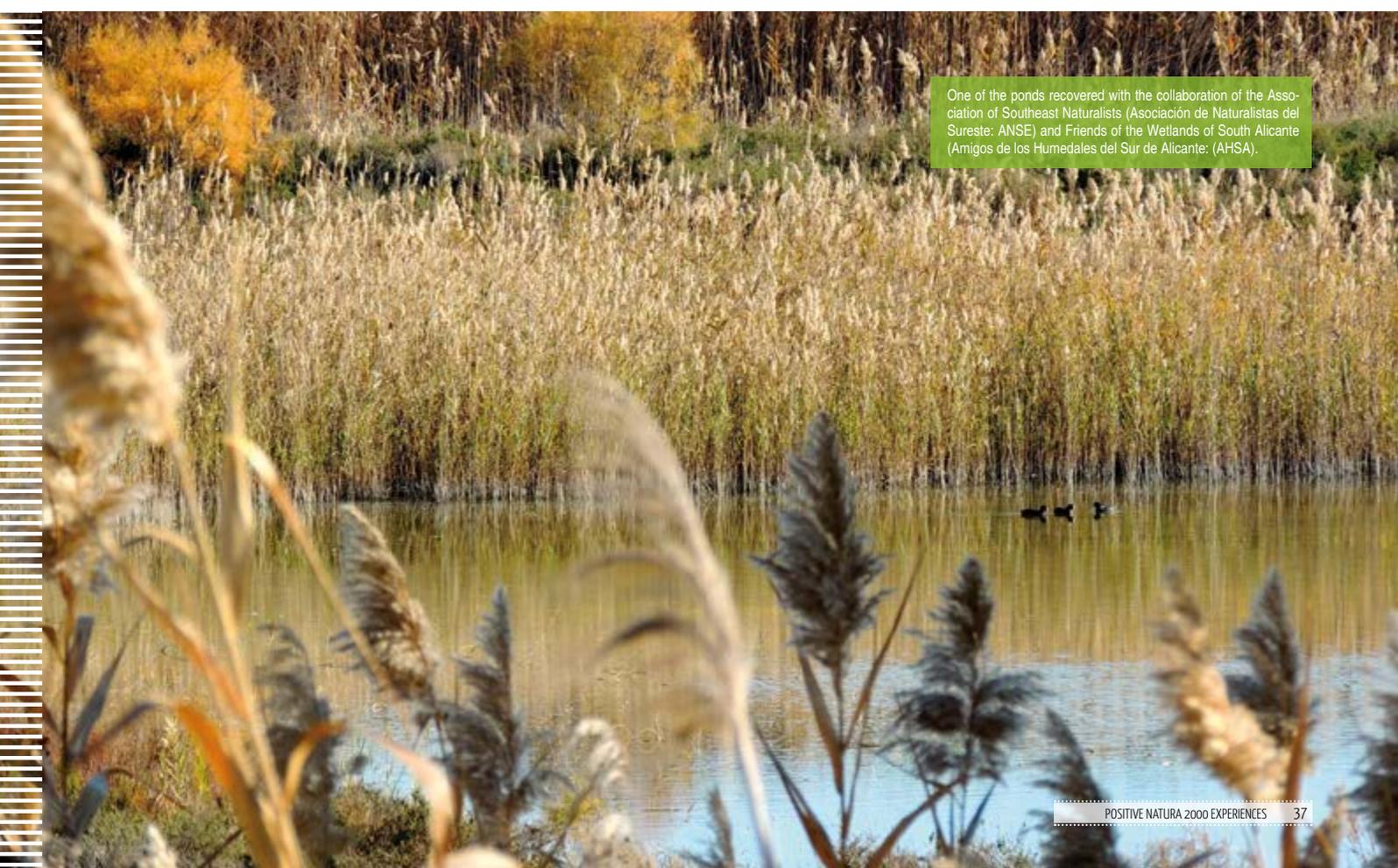
The moot point is whether their inclusion request is realistic, and the truth is that an unbroken tradition maintained since the eighteenth century certainly holds them in good stead. In that period Elche’s old albufera (coastal lagoon) was dried up to eradicate malaria and to turn it into arable land. A complex net of irrigation channels was built, still conserved today. The water is distributed by gravity to each terrace and is then recovered by a system of ditches called azarbes to be used anew.

These channels run uncovered, without cement or pipes, through mace- and reed-beds, setting up a vital ecological corridor between El Hondo and Las Salinas, rumps of the vast wetlands of the distant past. Down the centuries the farmers have conserved the plantlife along the channels to support the ditch walls, blending farming needs with nature conservation.

“We’ve always seen ospreys, cranes, harriers and many water birds flying about the channels but until recently we never really understood this as a value to harness commercially” acknowledges Fernando Antón, current president of the irrigation association and also a member of Cooperativa Carrizales. Fernando grows pomegranates, one of the products they want to promote.

Carrizales in fact has already been listed in Valencia Region’s wetlands catalogue and forms part of the perimeter buffer zone of El Hondo lake. But the farmers now want to become full members of the Natura 2000 network with all the concomitant rights, advantages and obligations. They are therefore carrying out environmental improvements such as tree planting, reed bed conservation, birdwatching visits and lake recovery.

The farmer’s membership request is currently being studied by the Consejería de Medio Ambiente (Regional Environment Ministry) where it has been “very positively appraised” according to the ministry itself.



One of the ponds recovered with the collaboration of the Association of Southeast Naturalists (Asociación de Naturalistas del Sureste: ANSE) and Friends of the Wetlands of South Alicante (Amigos de los Humedales del Sur de Alicante: AHSA).

ORGANIC SPELT PRODUCTION IN PALAZUELOS, GUADALAJARA

Name: La Espelta y la Sal
Owner: Francisco Juberías Ortega
Site: Palazuelos, Sigüenza, Guadalajara
Area: 300 hectares of cropfields, 26 of which fall within the Natura 2000 Network
Protection Scheme: SCI Valle y Salinas del Salado ES0000165 and SPA Valle y Salinas del Salado ES0000489
www.despelta.com

Spelt is a cereal generally considered to be the forerunner of today's wheat, and Paco Juberías is one of Spain's few spelt farmers. As such, he has closer links with Red Natura 2000 than might at first appear because part of his spelt-farming land falls within the Site of Community Interest (SCI) and Special Protection Area (SPA) of Valle y Salinas del Salado in Guadalajara.

The Río Salado (roughly translatable as "Salty River") gets its name from the salt deposits that float to the surface at various points of its run. Local people have mined this salt since the middle ages and traditional salt-working buildings, now in ruins, can still be seen in the area. Only one of these salt beds, La Olmeda, is still worked a bit today. But Paco clearly remembers how "whole families used to live off this industry only a few decades ago".

In these salt beds, in surrounding fields and along the banks of the River Salado grows a rare group of plants capable of withstanding the salinity of the water. These halophiles or "salt-loving" plants are important at European level and are the main reason for inclusion of this area in Natura 2000. It is in these fields where Paco's spelt grows and it is his love for his land, its culture and traditions, that inspired his brand-name: La Espelta y la Sal (Spelt and Salt).



Paco Juberías in front of Salinas de La Olmeda and the spelt fields.

The idea of growing spelt cropped up over a decade ago. It had much to do with the arrival in the valley of Juan Ramón Vidal, a journalist smitten with the Sigüenza countryside and its far-flung towns and villages. Juan Ramón encouraged Paco "to try something different, a forward-looking, wealth-generating and environment-friendly project". Spelt has a higher nutritional value than traditional wheat; it is also hardier and more pest-resistant. The downside is that the yield is lower, so it is more expensive and calls for a more discerning clientele.

To kick things off Paco converted his fields to organic farming and Juan Ramón brought in 500 kilos of spelt seed from Germany, where this product is in high demand. Nowadays Paco sells to customers throughout the whole of Spain; under the same brand name he also grows and markets lentils, chick peas, buckwheat, rye, sunflower seeds and various types of homemade pasta.

Pointing to a line of reeds growing in the middle of the cultivated plain, Paco explains "this field is lying fallow; that one over there will be growing sunflowers this year. We use the crop-rotation system to renew soil nutrients and we don't use any herbicides, synthetic fertiliser or pesticides". Two roe deer are grazing in the background. "There are lots around here" says Paco. At this moment a partridge scuttles along the dirt path. On the horizon lies Palazuelos with its medieval castle and holm-oak-cloaked hills, which also form part of this Natura 2000 site. Golden eagles, short-toed eagles and griffon vultures find in this land, like Paco, their own particular "bread and salt".



Mushrooms grown on spelt straw.



Traditional wheat sells at 30 euro cents per kilo; spelt at 60 cents, though the price does go up and down with demand.



Salinas de la Olmeda.

MUSHROOM RESTAURANT IN TABUYO DEL MONTE, LEÓN

Owner: Cooperativa Del Monte de Tabuyo
Site: Tabuyo del Monte, Luyego, León
Activity: 100-seat restaurant. Home-grown produce shop
Protection Scheme: SCI Montes Aquilanos y Sierra de Teleno
ES4130117 and SPA Montes Aquilanos ES4130022
www.delmontedetabuyo.com

This story starts in a León bra factory. “We were taken on as seamstresses in 1991 and things went OK for a few years”, explains Lucía while squeezing the pastry bag, “but in 2003 the factory found it cheaper to outsource so we saw the writing on the wall”. During those twilight years Lucía, Encarna, Visi and Carmen had been speaking, between stitches, about finding other ways of making ends meet. In Tabuyo del Monte, with 300 inhabitants, most of them pensioners, the job chances boiled down basically to an old peoples’ home or a forestry cooperative that worked the lumber resources of the Sierra del Teleno, at whose feet the village lies.

This sierra and Montes Aquilanos make up the best-conserved hills and mountains of La Maragatería, a picture-postcard district of wooded valleys and peaks soaring up to over 2000 metres. On the strength of its fauna it has been included in Natura 2000. The area also boasts valuable evergreen- and deciduous-oakwoods together with large plantations of maritime pine, an introduced species that here, over time, has blended well into the natural woodland. All this well-preserved woodland makes the area a mushroom hotspot.

This small 30-000-hectare paradise has some red-fruit plantations in the lowland areas. It was precisely an organic raspberry farm run by one of their daughters that got them thinking in the right direction. “Our first idea was to set up a jam-making cooperative” says Encarna while packing the pastries into the oven. But things soon developed further, when Marisa joined the group, a nurse from Astorga who was at that moment president of the Junta Vecinal (neighbourhood committee). Marisa takes up the story: “Tabuyo del Monte had just joined in the MYAS Project, under which local action groups were trying to bring the value of Castilla y León’s mushrooms to much wider notice. A list was made of every species growing in the local countryside; identification workshops were held and also courses for their use in the hotel trade. They’ve always been growing under our feet and we’d never noticed them before”.



The five entrepreneurs standing before the Sierra del Teleno.

“We were already mushroomers in our own right” Lucía puts in, “but we used to sell them to a firm that came to buy them all up at a take-it-or-leave-it price. Now, as well as picking them and using them in our products, we also grow our own *Boletus pinicola*, *Pleurotus ostreatus* and *Lentinula edodes* (Shiitake).”

The plan quickly took shape: saffron milk cap in raspberry sauce, boletus in tomato sauce, beans with mushrooms,...these dishes were a great success and soon led to a bigger challenge: a specialist restaurant “because we’re a special place. You’ve got to come here deliberately; it’s not really on the way to anywhere else. Our fame spreads by word of mouth” explains Visi.

But it was no easy ride: drawing on their own savings, LEADER funds and three loans, they ploughed nine hundred thousand euros into the business, raising the corresponding bank guarantees. “Do you know what one bank said? They asked us if our husbands knew what we were up to”, remembers Encarna with a dash of pride.

They also had to gen up on things themselves, taking courses on IT skills, business-administration and mycology, among others.

Finally, on 21 September 2007, the Comedor del Monte de Tabuyo opened its doors. From that day to this the five founders have been working nonstop; they’ve already paid back a large chunk of the loan, earn a modest wage and have taken on one other worker. In the last year the restaurant’s capacity has been increased by one third.



Some of the homegrown mushroom products.

Mushrooms help to finance Natura 2000 sites

“Mushrooms can help to solve the knotty problem of how best to finance some of the European sites of interest. Many of them are infertile farming land and precisely for that reason have held onto their natural wealth. At the same time, however, they are excellent for mushrooms, a natural resource renewed every year”. So speaks Jaime Olaizola, the expert who took on the task of listing mushroom species and production in the Montes de Tabuyo during the MYAS project.

“A well-run project, taking in such things as a mushroom-picking and -tasting package tour, makes money for the land owner, which is often the local town or village. This money can then be spent on tidying up the countryside, favouring mushroom growth and forestalling forest fires, which are the main threat to these pines”. In fact the Montes de Tabuyo have suffered two serious fires in the last fifteen years, the worst of them scorching 3200 hectares of land. The Junta de Castilla y León (Regional Council of Castilla y León) estimated a mushroom loss of 18 tons.

Another recent Junta estimate points to a mushroom-generated profit of 65 million euros a year. Olaizola believes this figure could be doubled or even trebled, on three crucial conditions: a previous study of the production of each area; restricting harvesting to 70% of production and setting up regeneration reserves.

The MYAS programme, now underway for the third time, is a trailblazing project in Europe. It began thanks to the LIFE project Mycology and Sustainable Harvesting (LIFE00 ENV/E/000544) promoted by the Soria Local Action Group ADEMA, which demonstrated the possibilities of sustainable mushroom-growing and -picking as a driver of rural development. During its three campaigns the project has now spread further afield to other districts and community groups.

EL ACEBARILLO AND THE HOLLY WOOD OF GARAGÜETA, SORIA

Name: El Acebarillo

Site: Holly wood of Garagüeta, Sierra de Montes Claros, in Soria

Activity: Pruning and sale of holly (*Ilex aquifolium*), guided tours and flower-arranging courses, holly cuttings and plantations

Protection Scheme: SCI Sierras de Urbión y Cebollera ES4170116 and SPA Sierra de Urbión ES4170013

www.elacebarillo.com

“The first person who sold Garagüeta holly to a florist was a woman from Almarza, more than 80 years ago. She would rush down to the road with two faggots and give them to a lorry to cart them off to Madrid”. The memory comes from 91-year-old María Muñoz, mother and grandmother of the promoters of El Acebarillo. The business of this company is the pruning and marketing of holly sprigs from Garagüeta, a unique 406-hectare holly wood that has been listed as a Site of Community Importance (SCI) and Special Protection Area (SPA) for birds in the northern sierra of Soria.

A holly-based flower arranging course run by the local action group Proynerso was the original spark for this commercial idea. “At that moment we cottoned on to the commercial possibilities of the holly wood”, explains Sagrario Narro, one of the entrepreneurs. Up to then the cut holly sprigs had been sent to Barcelona and Valencia, mainly, where they were sold with a fivefold markup. All the profit went to the finished product rather than the raw material.

Oddly enough, the sale of holly, a protected species, was banned in Castilla y León in 1991. In 1995 the technical services of the Junta de Castilla y León embarked on a four-year study and recovery project, concluding that holly pruning, something that had always been done for cattle fodder, did not harm the tree at all and even spurred its growth. Holly began to be marketed again in the region in 2000. The holly wood is owned, run and harvested by the Ayuntamiento (town council), which takes in the villages of Arévalo de la Sierra, Torrearévalo and Ventosa de la Sierra.



Sagrario next to a holly tree at her house door.

Eye opener

El Acebarillo was founded by fourteen members in 2002 after an employment workshop dealing with holly reproduction and guides of Garagüeta. “This course opened my eyes,” admits Sagrario. “Beforehand the holly wood was just a dehesa (open grazing wood) for summer livestock. Now I’m aware of its natural value and its importance as a tourism and economic resource”.

The hardest work is done in November and December when the holly wood is pruned and a selection is made of the sprigs and branches to be trimmed and sent to florists throughout the whole of Spain. The government marks out the sections of the wood that can be pruned and also lays down a maximum in kilograms. This area must then be left undisturbed for the next four years. “This season they authorised the pruning of 25,000 kilograms and about 15,000 were actually cut. Of this quota El Acebarillo processed about 1500 to 1800 kilograms”, puts in Cristina, another company member. Once the sprigs have been cut, a selection is then made of the best-looking ones. “About half of the cut wood is actually used”, comments Sagrario. The chosen sprigs are then packed into boxes weighing eight to ten kilograms and sold to florists for between 53 and 62 euros.

The holly bears the seal of origin and PEFC certificate of sustainable forestry.



Over four hundred hectares of holly, with an intermingling of elder, wild maple, wild service tree, crab apple, hawthorn, wild privet, buckthorn, sloe and dog rose.

Four Business Lines

Holly can be a surprisingly fruitful economic resource. El Acebarillo prunes the trees, buys the sprigs and sells them to florists. It also makes flower arrangements, centrepieces and bouquets and sells them in Christmas markets. Lastly, it runs flower-arranging workshops for associations and gives guided tours of the holly wood.

“Rather than as a company, our business is run on a self-employed basis. The profit is the salary we earn during the months of hardest work. It’s a top-up income and very welcome as such, but you have to work too”. This is precisely what the promoters of El Acebarillo now want, to be able to work throughout the whole year thanks to tourism and visits to Garagüeta.

The three villages between them have a winter population of slightly over fifty, which multiplies sixfold in summer. Despite this low population there are now three rural-accommodation establishments, driven mainly by the holly business.

“The holly wood is the council’s marquee resource, the driving force of development and main source of income. We’ve now got to harness this opportunity and make the most of its tourism potential” says Sagrario. She is also in favour of controlling visits “to prevent depletion in the heaviest visiting months”, and charging an entrance fee to see the holly wood.



Over four hundred hectares of holly, with an intermingling of elder, wild maple, wild service tree, crab apple, hawthorn, wild privet, buckthorn, sloe and dog rose.

Historical overgrazing, which prevented non-prickly competitors like oaks or beeches from gaining a hold, is one of the main reasons for the existence of the Garagüeta holly wood. Sagrario points out an idiosyncratic detail that confirms the overgrazing in the area: “around the lower part of each holly tree there is a characteristic whorl of leaves to protect it from livestock attack from below. This is a unique feature of this wood and makes it special”. She does acknowledge, however, that “removing goats from the wood was the only way to ensure its proper recovery”.

HUNTING ON LAS ENSANCHAS ESTATE, CIUDAD REAL

Name: Las Ensanchas.

Site: Campo de Montiel, Ciudad Real

Area: 1860 hectares

Land use: Hunting, cereal- and olive-growing. The permitted annual bag varies from year to year but is usually about 1500 partridges, 8000 rabbits and 250 wild boars

Protection Scheme: SPA Áreas esteparias del Campo de Montiel ES0000158

Las Ensanchas is a breeding site of the Spanish Imperial Eagle, a unique species of Mediterranean woodland; it is also run as a hunting estate. Its owner, Patricia Maldonado, sees absolutely no contradiction in this situation. “Nature is always striking a balance between life and death”, she quotes to justify her stance. This phrase comes from Jesús Nadal García, Professor of the Animal Production Department of Lleida University, who carries out the counts and genetic control of red-legged partridge on the estate.

“I’d love to be paid for our wildlife conservation efforts but sadly this is not going to happen. Hunting is the only way of conserving the wonderful biodiversity of this land into the future”, claims Patricia Maldonado.

The Las Ensanchas hunting species are the native red-legged partridge, rabbit, wood pigeon and wild boar. The hunting forms differ from species to species. The partridges are usually hunted in “ojeos” with the birds being driven towards a stand. Two ojeos are allowed a year. Rabbits are hunted “en mano” (rough shooting with an organised line of stalkers) and “batidas” (driven hunts). Finally the wild boars are hunted in the form of bigger driven hunts called “monterías”, with beaters and dogs, one of which is allowed each year. Despite this hunting activity, or even because of it, here nest such species as the aforesaid Spanish imperial eagle plus stone curlew, little bustard, little owl, eagle owl, barn owl, kestrel, great bustard, pin-tailed sandgrouse, mallard, coot and another 140 bird species, winning it the status of Special Protection Area (SPA) for birds.

Such an impressive bird list obviously does not come free of charge; neither is it achieved overnight.

The first “difficult” decision when she took over the estate was to remove the 400-head herd of goats that “stripped bare” the 680-hectare area of holm-oak wood called Sierra de Cabeza del Buey. “Taking the goats out of there allowed the vegetation to regenerate; this coincided with the arrival of the Spanish imperial eagle, boosted the number of wild boar and allowed us to draw up a hunting plan that is now the estate’s



Patricia Maldonado, the owner.



Breeding cribs, drinking- and feeding-stations for partridges and rabbits.

Management Measures:

There is a varied clutch of measures we take to favour partridges and rabbits, the two basic animals of the land’s food pyramid. Breeding cribs and pens are built as well as drinking and feeding stations. Cereal crops are sown; grubbed-up hedgerows are replaced and ponds with natural vegetation are provided. A mosaic landscape is being created with cropland, fallowland and wooded areas, and farmwork is always planned with the birds’ breeding seasons in mind to avoid destroying their nests by mowing, etc.

main money earner". The estate's biggest claim to fame, however is the encouragement of natural breeding and conservation of the wild red-legged partridge, winning it the reputation of the Mecca of the "Frenchman". Patricia has now become a staunch defender of the wild red-legged partridge as against what she dismisses as the "plastic" farm-bred birds.

The estate applied for inclusion within Natura 2000

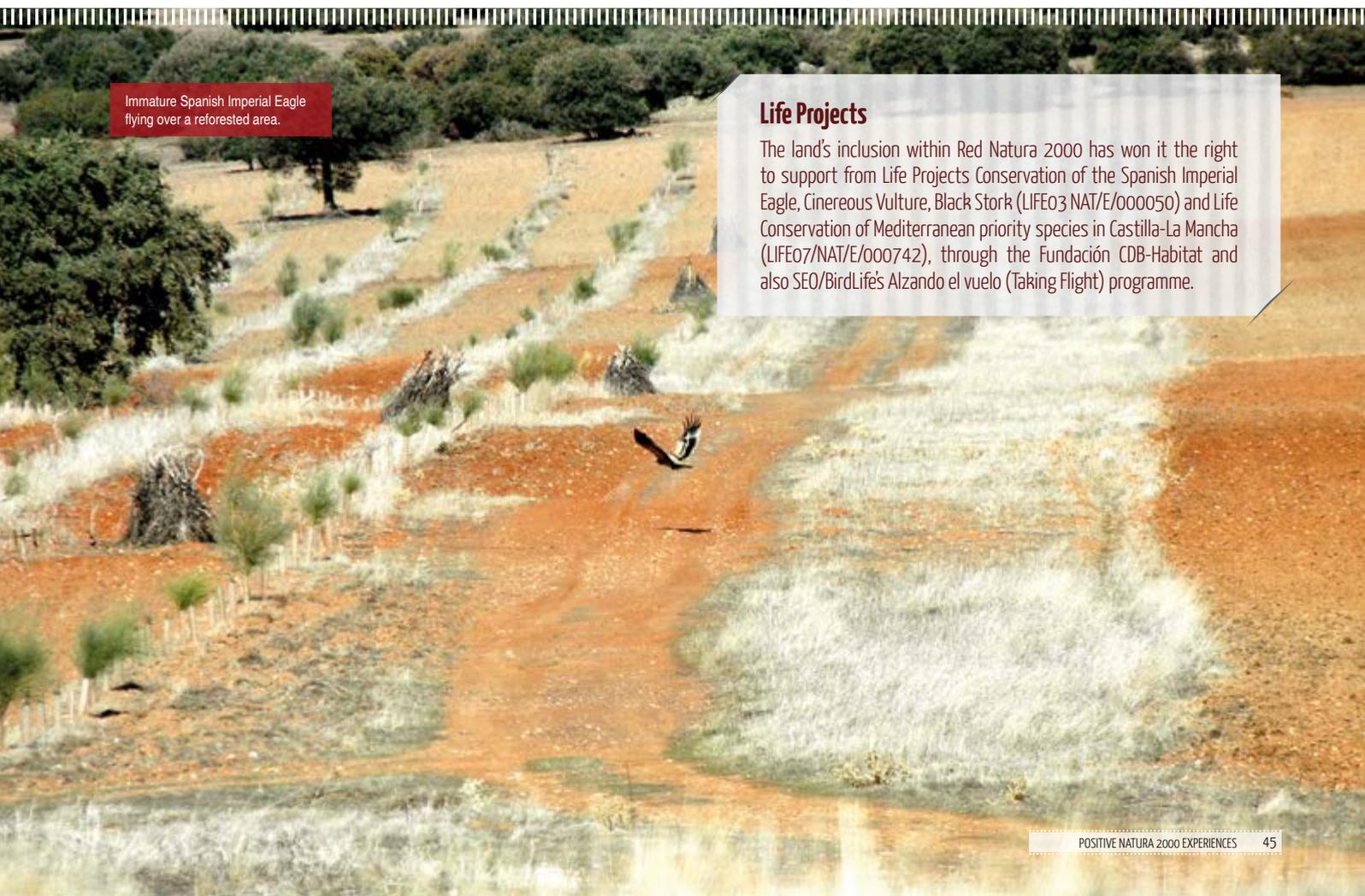
Patricia well remembers the moment when she applied for her land to be included in Natura 2000, much to the astonishment of her friends who advised her to shun any nature-protection scheme like the plague. "They told me I wouldn't be allowed to turn over a stone on my own land without permission. Hunting and all past activities that had built up its natural wealth today would be banned, they warned. All quite ridiculous, of course". Time has proved her right. This insight and commitment have turned her property into a species-conservation beacon and one of the few hunting grounds where you can still hunt wild birds instead of "chickens". "I knew this was the right path, as the only viable way of managing an estate of poor, stony land: we had to hold on to what made it unique: its biodiversity. No other form of management ever crossed my mind. Mind you, to do something like that you need plenty of get-up-and-go because the effort has been huge. But it's all been well worthwhile".

Can an estate run like this make money?

"An estate like this won't make you rich but it keeps you ticking over. Obviously, without any earnings at all there is no investment or input and the land ends up dying and you have to go elsewhere. The estate is my only source of income and the ongoing effort of ploughing back profits to keep it going is huge".

Patricia defends the Common Agricultural Policy (CAP) grant scheme. "Without grants the Spanish countryside would be abandoned and disappear. If we wish to maintain this low-yield countryside with its rich biodiversity we have to defray it somehow". She does disagree, however, with the recipients of some of the grants. "It's crucial to help out the strong-suit sectors: olives, vineyards and wildlife. It is also essential to recognise the effort of farmers like ourselves who are determined to preserve our natural riches".

Patricia now asks for Natura 2000 to be properly financed. "I see it as the future but at the moment it is only a dream. Natura 2000 is a good opportunity to encourage land owners to conserve their properties. The challenge is to turn Natura 2000 into an economic value".



Immature Spanish Imperial Eagle flying over a reforested area.

Life Projects

The land's inclusion within Red Natura 2000 has won it the right to support from Life Projects Conservation of the Spanish Imperial Eagle, Cinereous Vulture, Black Stork (LIFE03 NAT/E/000050) and Life Conservation of Mediterranean priority species in Castilla-La Mancha (LIFE07/NAT/E/000742), through the Fundación CDB-Habitat and also SEO/BirdLife's Alzando el vuelo (Taking Flight) programme.

CORK FARMING IN SIERRA DE ESPADÁN AND SIERRA DE CALDERONA

Name: Espadán Corks S.L. and Oret S.L

Site: Sierra de Calderona (Serra Calderona) and Sierra de Espadán (Serra d'Espadà)

Activity: Cork farming in the Sierra de Calderona and Sierra de Espadán. Cork stripping for making wine-stoppers

Area: Several estates adding up to 2000 hectares

Protection Scheme: SCI Serra d'Espadà ES5222001 and SPA Serra d'Espadà ES000468 and SCI Serra Calderona ES5232002 and SPA Serra Calderona ES000469

www.espadancorks.com



Adolfo Miravet in front of a heap of certified cork.

Nobody would deny that cork is a natural, ecological and renewable product obtained by means of an environment-friendly process that has traditionally played a key stabilising role in the Mediterranean ecosystem. Cork-oak woods and the cork-stripping and -processing industry also generate many jobs in the countryside.

With such a good press behind it, the easy option would just be to strip away the cork oaks (*Quercus suber*) without more ado and sell off the product. The Miravet siblings, however, Adolfo, Herminia and León, were keen to go further. They wanted to show that cork-oak management and harvesting can be intrinsically sustainable. In 2007 1000 hectares of cork-oak wood were certified under the FSC system; one year later they certified the chain of custody of their wine-stopper firm. Their woods, about 150 to 200 hectares of which are stripped each year, produce an average of 200 tons of cork a year, translating into over five million wine-stoppers.

Their family owns 2000 hectares of cork oak in the Sierra de Calderona and Sierra de Espadán, belonging to the Natura 2000 Network as a Special Protection Area (SPA) for Birds and Site of Community Interest (SCI). These woods have produced cork since the start of the century, when their great grandfather pooled several family smallholdings that had been gifted to their workers by the Belgian General Cork Company when it went bust at the end of the nineteenth century. Back then cork was sold in bulk; nowadays nine different types of wine-stopper are made. "The profit and added value lies in the top-quality finished product and the personalised service given to the customer", claims Adolfo.

Complicated Management

The woods, growing on steeply sloping ground and split up into many small properties, are by no means easy to harvest. The ground is very thin and poor with little water-retention capacity. Growth rates are slower than in other Spanish cork-oak woods, which have a nine-year bark-harvesting cycle. In Espadán the bark stripping cycle is twelve or fourteen years. This means the resulting cork is denser, giving it better wine-stopper properties", explains Adolfo.

The woodland and wine-stopper factory between them employ nine people right round the year. Several more are hired during the bark-stripping period. "These are the time-honoured bark-stripping craftsmen, or in some cases the sons who have stepped into their fathers' shoes".

Wood-roaming goats

Adolfo complains that "the lack of public aid for silvicultural work means that trees struggle to grow amongst all the competing undergrowth, which is also a fire waiting to happen". For this reason they decided to bring back goat herds as a wood management tool. Their choice fell on the payoya breed, a goat from the Parque Natural de Grazalema, now in danger of extinction. "It's a very tall, hardy goat that can also be farmed for milk and meat, making them more sustainable and allowing us to cut down the livestock load". They have about 300 head of goats grazing over more than 2000 hectares. They themselves provide the land and infrastructure. The goat herders, from the Escuela de Pastores de Cádiz (Cádiz Animal-Herders School) provide the goats, keeping the proceeds as their own profit. The wood thus recovers a use it was always put to in the past.

Natural pest control

Five years ago they put up bat nest-boxes for insect-control purposes. This proved to be especially effective against the jewel beetle. But the insect posing the biggest problem now is the beetle called oak pinhole borer, *Platypus cylindrus*, which causes oak dieback due to the fungi left along its bored galleries in the trees.

The fungicide used to combat this used to be methyl thiophanate. But the Miravet siblings have now replaced this with a preventive treatment based on vegetable extracts from thyme, which repels the insects, a fermented mash of cereals, which helps the cork to grow back quicker, horsetail (*Equisetum arvense*) and organic copper. "Worker safety is now much better because they no longer have to walk around all day with a chemical product strapped to their backs. It's slightly more costly than the fungicide but it's worth it and is much more consistent with our beliefs", says Adolfo.

Cork extraction with mules

The stripped cork is carried down from the wood by mules along rides over two metres wide. They were keen not to make full-scale forest tracks for this purpose because "there would have to be many of them and they would therefore be very costly and break up the landscape. Although they would be used only every fourteen years they would have to be worked on every year. This wouldn't make any economic sense".

Bonelli's Eagle

In these woods nests one of Spain's most striking and beautiful birds, the Bonelli's Eagle. From April to May chain-saw use is banned around its nesting sites. "We don't use it and that's that. There has been no public participation in the conservation of nature sites or in the drawing up of management plans, and this is a mistake", complains Adolfo.

CHESTNUT ORCHARDS IN VALLE DEL GENAL, MÁLAGA

Members: Small woodland owners

Site: Valle del Genal, Málaga

Activity: Chestnut production, preparation, packaging and marketing.
Production from three to five million kilos of chestnuts

Protection Scheme: SCI Valle del Río del Genal ES6170016

www.valgenal.es

“Oh, if its centenary chestnut trees you’re after, there’re stacks of them!” exclaims Francisco Boza, President of the Cooperative Castañas Valle del Genal in Málaga. “There’s one called the Holy Chestnut of Istán that’s said to have been there since the Reconquista”. This “holy” chestnut tree is reckoned to be between 800 and 1000 years old. But this is by no means the average age of chestnut trees in this sierra. It forms part of the Site of Community Importance SCI Valle del Río Genal, one of Andalusia’s best-conserved Mediterranean woods, with stands of chestnuts, Portuguese oaks, cork oaks, holm oaks growing amidst scrub of gum rockrose and heather. The locals preen themselves on maintaining constant tree regeneration. “That’s why they produce the best chestnuts”, he adds.

“Chestnuts have been farmed here since time out of mind, but it’s been an important business for about the last seventy or eighty years”, calculates Francisco. He stresses the importance of this business to local household economies: “In a good rainfall year chestnuts might well account for half a family’s income since the downturn hit”. The size of the woods ranges from 10 to 15 hectares, though they vary a lot from town to town.

About 40% of the orchards are registered in one of the four first-tier cooperatives that now exist in the valley. Two of these cooperatives have also formed another second-tier one called Castañas Valle del Genal, created in 1991. This company provides them with packaging machinery, training courses, marketing arrangements with no middlemen and also gives their produce a seal of approval, earning them a 20-30% price mark-up.

October to November is the busy period, when the chestnut woods and the cooperative are buzzing with people. These are forty days of “flat-out, go-for-broke work”. The chestnuts have to be picked up from the ground and loaded into baskets. Up to fifty thousand kilos of chestnuts stream into the cooperative every day, to be sterilised, classified, scrubbed...The whole family chips in.



Francisco Boza, President of the Cooperative Castañas Valle del Genal.



Narciso is a councillor of Pujerra. This council plans to set up a factory for processing chestnuts and making chestnut-based products.

Every year between three and five million kilos of chestnuts might be harvested in the valley, depending on the rainfall each year and other external factors. “Last year was excellent because Italy’s chestnuts have been hit by the chestnut gall wasp, points out Narciso Morales from Pujerra, still puffing with the effort. He also belongs to the Genal cooperative. The owner of the orchard, “slightly over two hectares”, is his 73-year old father Francisco, whom Narciso helps in all his tasks “because there’s always something to do round here”. Before spring comes around all the pruning work has to be done and all the old shells removed from the ground.

Serranía de Ronda is tricky, very hilly terrain, and the chestnuts have to be harvested by hand. “Nowadays we wear gloves against the spiny shells but in the olden days they carried about a mace to open the shell and wore these deiles tied on with string...” He has to be asked to repeat the mystery word “deiles” and explains: “... these sort of rubber thimbles on the end of the fingers. Inventions of olden times”.



Valle del Valgenal has 3500 hectares of chestnut woods shared out between the villages and towns of Igualeta, Cartajina, Pujerra, Jubrique, Faraián, Paranta and Genalguacil. These chestnut-growing towns hold a festival every year; typical dishes are prepared to demonstrate the culinary potential of chestnuts and the old harvesting utensils are displayed and explained.

ULTZAMA MYCOLOGY PARK, NAVARRA

Name: Parque micológico de Ultzama (Ultzama Mycology Park)

Site: Navarra

Activities: Mycology park, environmental education, instruction and advice for mushroomers

Manager: Garrapo S.L

Area: 6000 hectares

Protection Scheme: SAC Robledales de Ultzama y Basaburua ES2200043

www.parquemicologico.com

Depending on their reactions to mushrooms, people can be broken down into mycophages, mycophiles and mycophobes. “We people from Navarra tend to be mycophiles and mycophages, in other words mushroom-lovers and mushroom-eaters”, says Amaia Esparza, director of Ultzama Mycology Park, in Navarra.

This park takes in twelve of the fourteen concejos (wards) of Valle de Ultzama. Through their overarching ayuntamiento they came to a mutual and epoch-making agreement: to regulate mushrooming in their common woodland, conserving and enhancing the mushrooms and their habitats while bringing the mycological culture to much wider notice. The reason for all this regulation was the glut of outside mushroomers who “blitzed” the woodland every year. “In one week they hoovered up everything; about 9000 cars invaded every last corner of the woodland. This excessive behaviour damaged the woodland, destroyed the mushrooms and associated plantlife and caused no end of annoyance and nuisance to local residents”, explains Patxi Tornaría, mayor of Ultzama.

Some method had to be brought to this mushrooming madness, to ensure the survival of this resource into the future and avoid deterioration of all the values that had merited Natura 2000 listing. This area, made up by deciduous oakwoods a hunting estate, meadows and standing water, is used for livestock grazing and timber production and is home to an important community of amphibians, beetles, mammals and birds. The answer was the mycology park.

Javier Gómez, of Garrapo S.L., was tasked with drawing up a mycological resource plan to study the possibilities of mushroom production, farming and gathering. This plan laid down a maximum load of one person per five hectares, 600 people maximum in a 6000-hectare wood, of which only 3000 would be exploited.



But this plan had to be enforced in a very participative way. Local and outside mushroomers were surveyed and interviewed. “Involvement of all stakeholders from the start was a sine qua non of success”, points out Amaia.

The key measure was to establish a mushrooming permit system, with fees varying according to the home town of each harvester and the number of mushrooming days each one wanted.

Imposing fees on locals who had gathered mushrooms free all their lives was no easy matter. “In the surveys they accepted the fee as a necessary evil”, says Amaia. At the beginning of every year an average of 220 residents from the 1700 inhabitants of the whole of Ultzama pay their



Amaia with a huge *Boletus edulis*.



Mushroom pickers in the mycology park.

standing-order fee of seven euros “without yet knowing how the season is going to go, so the take-up seems to be good”, comments Amaia.

By setting up the mycology park Ultzama’s residents have managed to prevent excessive mushrooming and reduce the pressure on the local woodland, guaranteeing the ongoing future of this resource and turning Ultzama into a tourism destination. “The profile of the visiting mushroomer has changed. They no longer come to plunder mercilessly; they stay around the area a few days, consume more and visit the valley for other reasons than just mushrooming”, says Oihana Larraia, owner of Orgi, a bar with a mycological menu in Lizaso.

The whole mushroom-cuisine-culture-nature idea has now taken hold and is bearing fruit. “Now we have a visitor-information centre and people come from Madrid, Catalunya and even from as far afield as Andalusia; this would be inconceivable without the park. We hoteliers are delighted”, Oihana tells us.

Self-financed

The mushrooming fee makes the mycological park self-financing. It is run by Garrapo, a young firm that has been in the project from the word go, made up by professional conservationists and nature-site managers. Revenue defrays management time and the purchase of website maintenance and materials.

The park earns about 40 to 45,000 euros a year. Most of this is spent on attending the public in the visitor’s centre, drawing up the mushroom report and running woodland visits.



Garrapo's professional team in Lizaso's visitor's centre.

Mushrooming Permits:

Seven euros a year for people registered as living in any of the 12 concejos of Ultzama.

Five euros for a daily permit.

For outsiders there are three types of permit:

- Monday to Sunday: 90 euros a year.
- Monday to Friday (except public holidays): 50 euros a year.
- Weekends and public holidays: 50 euros a year.

OS MIÑARZOS MARINE RESERVE, A CORUÑA

Fishermen's Associations: Lira and Muros

Site: Seno de Corcubión, between Punta Raposeiros and Punta Larada

Activity: Fishing with traditional gear and under the criteria laid down by the reserve management body

Reserve area: 2162 hectares, of which 1160.88 hectares are a Site of Community Interest with a 46% marine protected area

Protection Scheme: SCI Monte e lagoa de Louro ES1110012

www.fundacionlonxanet.org

"You should see how my eight-year-old's face light up when I come home with a 7-kilo pollack. He loves the sea. How can I not think about the future?" Just for a moment, when speaking about his son, this swarthy, well-built man's features soften. Primitivo Pedrosa is an artisanal fisherman from Muros and works on one of the 57 boats authorised to fish in the Os Miñarzos Marine Protected Area off the A Coruña coast, part of which is included in the Natura 2000 network.

The Reserva Marina de interés pesquero Os Miñarzos (Os Miñarzos Marine Reserve of Fishing Interest) was created in May 2007 with the blessing of the Xunta de Galicia (Regional Government of Galicia), but on the initiative of two local fishermen.

The Devastating Aftermath of the Prestige Oil Spill

The Carnota coastline became tragically famous in November 2002 with the Prestige oil slick but even before that date things were not going well for artisanal fishermen. The increasing takeup of more modern but more aggressive techniques like trawling together with overfishing were leaving their mark in the form of "fewer octopuses, fewer goose barnacles, fewer spider crabs...", and, as a knock-on effect "doom and gloom in the fishing towns", diagnoses Antonio García Allut. This social anthropologist from A Coruña University is one of the founder members of Lonxanet, a foundation also set up in 2002 with the remit of "helping artisanal fisherman to regain control over their work and lifestyle".

All this happened before the Prestige spill.

The tanker's tragic aftermath was the turning point.



Antonio García Allut, anthropologist and president of Fundación Lonxanet.

The sea belongs to everyone and we have got to look after it

Twelve years later Primitivo Pedrosa's championing of sustainable fishing is impressively far-sighted. "The reserve has its detractors and their argument is always the same; they're always going on about the sea having no fences or gates, but I reckon they just spout it out from ignorance. It's just like a bank that leaves its safes open; they get looted. The same with the sea and fishing. Before the reserve was set up, the mindset of most was: the sea doesn't belong to anyone, so I'll just pitch in and take what I want. Now most of us think the sea belongs to everyone and we're duty bound to look after it".

Primitivo is currently the representative of the Federación Gallega de Cofradías (Galician Federation of Fishermen's Associations) on the managing body of the Os Miñarzos Reserve. He could be held up as a prime example of the change of mindset after the Prestige disaster and the appearance of Lonxanet.

In the immediate post-Prestige years the fisherman of the Lira Fishermen's Association decided to rise from the ashes by learning from the experience. Lonxanet stood right beside them, mediating, expediting matters, while the reserve took shape in the meetings of fishermen and the Xunta. They themselves ring-fenced the reserve. "It's us who are on the sea day after day and we know about the stocks and tides", points out Primitivo Pedrosa. "We saw this as a way of gaining speaking- and voting-rights, because the government might know all about legislation but it's us who know about how to go about things on the sea". In 2006 the fishermen proposed taking part in reserve management on a fifty-fifty basis and the Xunta accepted the idea. In 2007 the Área Marina Protegida Os Miñarzos officially came into being with the support of the Lira and Muros Fishermen's Associations. A census was drawn up of boats with access rights; non artisanal fishing was banned and two untouchable sanctuaries were established, the two spawning hotspots, the two lungs of the reserve.



New challenges: become more efficient and extend the reserve

In 2012 the economic downturn put paid to the Xunta's plans for reserve surveillance and scientific and productive monitoring. The lack of this outside control led to ugly clashes between fishermen and poachers, which detractors jumped on to write off the experiment as a failure.

"This was without any doubt a watershed moment", acknowledges Primitivo. "Now we're working on new, more efficient and less costly surveillance measures, such as infrared beams and sensors". Lonxanet's philosophy has taken hold throughout these years and the reserve fishermen are seeking new solutions and even have more far-reaching ambitions: extension of the reserve to 100,000 hectares, making it fifty times bigger, and opening it up to 800 boats. A proposal of this scope needs the agreement of eight fishing communities, those living to the

Opinion surveys conducted two years after setting up the reserve show that 62% of fishermen consider themselves to be better off with than without it.

north up the River Castro in Finisterre and those living to the south up to the River Sieira in Porto do Son. The process is now underway, although at least two of the Fishermen's Associations are digging their heels in. "I'm optimistic" Primitivo Pedrosa forthrightly says. "Just look at how Os Miñarzos started, how many sceptics there were and how many are dead keen to jump on the bandwagon now".

The Xunta is waiting for this agreement to be reached before making any pronouncement itself but it does acknowledge that since Os Miñarzos was set up "activity has become more diversified", the whole thing is "more orderly and constant" and "things are conducted with more specialisation".

SURALGAE, SEAWEED FARMING IN BAHÍA DE CÁDIZ

Name: Innova Vegetalia del mar S.L

Owners: Mónica Medina, Raquel Velázquez and Consuelo Guerra

Site: Based in San Fernando de Cádiz. Seaweed harvesting in 15-hectares of Chiclana mudflats

Activity: Harvesting, processing and packaging of seaweed for culinary and cosmetic purposes

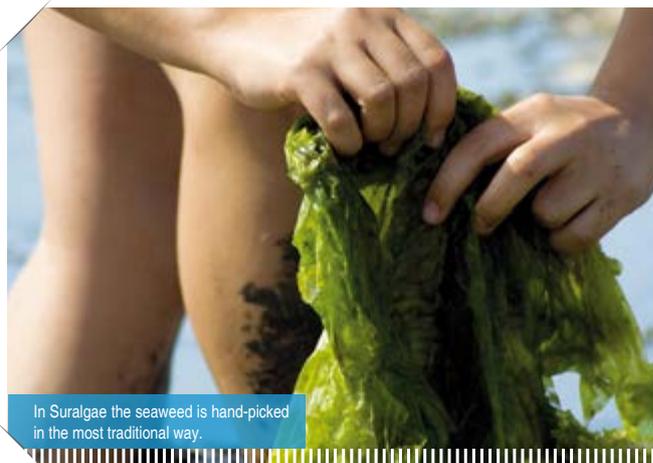
Protection Scheme: SCI Fondos Marinos de la Bahía de Cádiz ES6120009 and SPA Bahía de Cádiz ES6020009

www.suralgae.com

Consuelo, Mónica and Raquel are affectionately known by their customers as “the seaweed kids”. They are three young marine-science graduates who have dared to create a trailblazing firm in Andalusia: seaweed farming in the Bahía de Cádiz.

La Bahía is an idiosyncratic Natura 2000 site, heavily built up and worked on by man on the one hand and wonderfully rich in all sorts of natural resources on the other. Saltmarsh predominates, harbouring many species of birds, fish of commercial fishing interest and salt-loving plants. It is within these saltmarshes, in the part of the mudflats modified for aquaculture, where the seaweed harvested by Suralgae grows. The specific species are sea lettuce, sea moss, green laver and the salicornia plant known as samphire or sea asparagus.

The original idea was the brainchild of one of the women, Consuelo, whose brother is a chef. “Seaweed is becoming increasingly appreciated in haute cuisine. It is nutritional, has a wonderful tang of the sea and is also decorative” she says with real passion. Working up the original idea into a solid project took one-and-a-half years of information-seeking and enquiries. “There is hardly anything to go on in Spain so information is hard to come by. Even worse, we don’t even exist as a sector; we don’t fall within the fields of fishery, seafood or arable farming so we’re not even eligible for grants. The only reference to seaweed in Spain’s fishing law (Ley de Pesca) is the stipulation that special authorisation is needed for collecting marine flora. We’re in a sort of administrative limbo”. Despite these teething problems, Suralgae finally obtained all the necessary permits in 2010. In the last year it began to collaborate with other local firms to offer products with a special character: “we provide them with the seaweed and they make omelettes or dishes with tuna or cheese with seaweed”.



In Suralgae the seaweed is hand-picked in the most traditional way.



The esteros are the modified part of the mudflats controlled by sluice-gates for carrying out such activities as aquaculture, salt harvesting and seafood gathering.

Sustainable resource harvesting

Under a 2011 decree Suralgae's activities are officially regulated and endorsed by the Parque Natural de la Bahía de Cádiz (Cadiz Bay Nature Park); it also receives permanent advice from Cádiz University. The university's ecology professor, Ignacio Hernández, explains that these seaweed species are abundant. "To give an example, it's like collecting snails". But he also stresses their usefulness. "The collected seaweed species come from the Ulva, Gracilaria and Gracilariopsis genera, which act as biofilters of the outflows from the aquaculture activities in the bay. Unharvested, and fuelled by these outflows, they might grow out of control".



Sea lettuce and sea moss.



ARTISANAL DOLPHINFISH FISHING, MALLORCA

Participants: About one dozen boats from the Fishermen's Association of Cala Ratjada

Site: Cala Ratjada, Mallorca, Balearic Islands

Activity: Artisanal fishing with a specific net and floating lures.

Protection Scheme: SCI and SPA Muntanyes d'Artá ES0000227

At the end of August the boats putting out to sea from the port of Cala Ratjada in Mallorca are strangely adorned with branches and palm leaves. It is the start of the dolphinfish season and to catch this "smart and lightning-quick" fish the fishermen prepare curious floating structures called capcers, made up of palm leaves and other vegetation. Over the years the fishermen have observed how the dolphinfish like to rest up beneath floating elements on the sea, so this is one of their artful devices to catch them.

Two months earlier the lots have been drawn in the Fishermen's Association. This draft whittles down the area's twenty artisanal fishing boats to the ten that will be allowed to fish the zone that season. It was the fishermen themselves who decided to impose limits: "two hundred kilos a day for each boat with permit; this allows us to control the price and lengthen the season", explains Bernard Martí, a fisherman from Cala Ratjada. This Fishermen's Association took this decision in 2007; three years later it was brought in for the rest of Mallorca's Fishermen's Associations.

The capcers also serve as a reference point for casting the net. This calls for great expertise; the net must be deployed properly without sinking to the bottom and it is reeled back in after a few minutes when a shoal is detected. These are moments of intense activity. "You have to keep all your senses peeled", says Martí. "With the dolphinfish you can never let your guard down. One morning you go out to sea full of beans and zilch. Then, just as you're getting ready to chuck it in for the day, a shoal bites and you catch the two hundred kilos in a flash".

Legend has it that the Mallorcan name for this fish, llampuga, comes from the word llamp, lightning, because the fish come closer into the shore after a storm. "So they say. In fact they tend to come in closer to land whenever the temperature rises above 16 degrees," Martí tells us. "But it's a neat legend even so."



Bernat Martí.

Dolphinfish is Mallorca's second biggest earner after lobster, bringing in 700 to 800 euros a day during the fishing season.

Thirty eight percent of the SCI and SPA Muntanyes d'Artá is marine territory whose seabeds are covered by the marine grass species called *Posidonia oceanica*. Its birdlife features such species as Audouin's gull and osprey.

The whole town of Cala Ratjada throws in its lot with the Fishermen's Association to celebrate the *Mostra de Sa Llampuga* to bring out all the dolphinfish's culinary possibilities.

A photograph of a fishing boat on the water at sunset. The sun is a large, bright yellow circle on the left side of the horizon, casting a golden glow across the sky and reflecting on the water's surface. The boat is in the foreground, silhouetted against the bright sky. It has a tall mast with a thin antenna or pole extending upwards. The water is dark blue with shimmering orange and yellow reflections from the setting sun. The overall mood is serene and peaceful.

Low-impact fishing

The dolphinfish is a pelagic species that swims into the Mediterranean in spring to spawn. In Mallorca they are caught while still young, between three and six months old, when they are still moving around in shoals, but the sustainability of this fishing is borne out by scientific studies. “This is an ocean-going species that has a high fertility rate and grows very quickly”, explains Enric Mas-sutí, researcher of the Instituto Español de Oceanografía (Spanish Oceanography Institute) and expert in this species. It is estimated that “traditional fishing with low-tech methods and boats as in Mallorca has a small impact on the population of this species, which is however a fundamental source of income for the island’s artisanal fishermen”.

LA RESTINGA MARINE RESERVE, EL HIERRO

Name: La Restinga Marine Reserve on Mar de Las Calmas
Site: Island of El Hierro, Canary Islands
Activity: Fishing
Area: 1180 hectares
Protection Scheme: Special Area of Conservation (SAC) Mar de Las Calmas ES7020057. Marine reserve since 1996 by request of local fishermen

“What matters is not what you take out, but what’s left in the sea, to ensure fishing into the future”. Are these the words of an ecologist or a fisherman? Well both, really. David Pavón, 35 years old, has been fishing since the age of 18 in the area now covered by the Restinga Reserve, Spain’s first marine fishery reserve set up on a proposal from local fishermen in 1996.

It was Fernando Gutiérrez, President at that moment of the Cofradía de Nuestra Señora de los Reyes (Fishermen’s Association), who managed to convince his fellow fishermen of the necessity of creating a fishery reserve to guarantee their own future. Catches were falling every year; it made no sense to continue exerting the same pressure on a dwindling resource. “The environmental education efforts to explain how things work and also the monitoring of the new arrangements have shown we made the right decision”, comments David.

The early years were tricky. The fishermen’s short-term mindset was hard to change. “Fishermen used to throwing 10 creels into the sea to catch 20 kilograms of fish found it very difficult to understand how they were going to catch more by throwing in none now.” In fact catches did fall at first but things soon turned round. “The sea had to be given its time to recover and then it turns out to be super grateful, almost instantly”.

Seventeen years later all the fishermen, even the doubting thomases, now agree the decision was the right one. “Those who were fishing exclusively in the reserve area before its declaration are now the biggest beneficiaries; more fish are caught of all species”. The fishermen’s environmental outlook has also changed. “The difference between then and now is abysmal. Beforehand all the boat’s waste was tipped straight into the sea. Now it’s brought back to land and recycled. In the past I’ve even seen batteries on the seabed; this would be inconceivable today.”



David Pavón in his new boat San Miguel.

The efforts of all the fishermen and their commitment to “their sea” have “boosted their sense of uprightness. Improper behaviour is now reported and the fishermen themselves are the first and best law enforcers”. Rational harnessing of natural resources forges emotional bonds between human beings and nature. Smart people are never going to bite the hand that feeds them. “It’s really quite simple; everything you do to the sea you’re really doing to yourself. What goes around comes around”.

The reserve has proven to favour species reproduction while also benefiting sea studies and helping to gauge its recovery capacity, to ascertain man’s impact on the environment. But the reserve, which served as the basis for Natura 2000 listing, is not an end in itself. “It’s only a means of working towards sustainable fishing”. Another crucial aspect is the fishing gear and methods used. The only method allowed here is hook-and-line fishing, but never longlining, and some traps on an exceptional basis for certain species. “It’s simple maths; before we cast ten hooks to catch one fish; now we cast only one”, explains David.



Port La Restinga. Island of El Hierro.

Reserve map and zoning

The reserve is divided into three different zones:

- Integral reserve: this is reserved solely for professional tuna handling and previously authorised scientific sampling.
- Two adjacent reserve zones: these are reserved for professional artisanal fishing by local fishermen, such as hook-and-line fishing (short handline and wahoo pole), net fishing (salema porgy nets, baited hoist nets), drums for moray eels and prawn creels. Also permitted is line fishing from the shore, recreational yachting and underwater diving.

Species fished

The roster is endless; even the great migratory Thunnini like wahoo, tuna, yellowfin and bigeye. Parrotfish, comber, megrim, different types of moray, grouper, black grouper and prawn all spawn in its waters.

“Everyone fishes for everything, basically, though we all have two or three favourites. Fishing is a streaky business: one month you catch 30 and the very next month nothing. But the fisherman’s expense accounts are year round. In the end you earn enough to make ends meet, not much more”, says David.

Nuevo San Miguel

David’s 7.35-metre boat, in which he goes out to fish with his partner Richard Quintero, is called Nuevo San Miguel. They fish an average of 15 days a month, from one hour before dawn to about two or three in the afternoon. They set out only when the “Mar de Las Calmas” lets them. He decides if the sea is navigable. “The weather forecasts are pretty accurate nowadays. If they’re bad we take a rain check till the next day”.



Tuna, among the species caught.

Tourism and underwater diving

Restinga reserve has brought more than good fishing. “Most of the local business is sea-dependent: fishing, accommodation establishments, underwater diving and restaurants”, enumerates David. Diving centres have increased from two to twelve in recent years, with a knock-on effect on the demand for self-catering accommodation and hotels. The reserve’s marked diving points offer an underwater visibility range of up to 30 metres, so there are plant formations growing at a depth of 70 metres.

It was Jack Cousteau who said it: “Man can’t fly; underwater divers can”. In Restinga they can stare ahead into the vast blueness while hanging over a 700-metre cliff.

ECOTOURISM ON TORRECILLAS ESTATE, MURCIA

Site: Corvera, Murcia

Activity: Rural ecotourism and almond-, olive- and carob-growing

Area: 96 hectares

Protection Scheme: SCI Carrascoy and El Valle ES6200002

www.fincatorrecillas.com

“Give the earth what she needs and she’ll repay you with interest”. This adage was engraved in Paco de Lara’s mind by his 92-year-old grandmother María Luisa, former owner of the Las Torrecillas estate. With this guiding principle in mind he knows he can’t go against nature and come out winning. “We’ve got to help her to be herself, not to change her. You’ve only got to realise what she’s offering and make the most of it”.

This calm, observant and respectful outlook means that where others see a problem, Paco sees an opportunity. “I’ve got the drought to play in my favour. Every water source on the estate is an invitation to life, to wildlife. So every spring or pond we can restore helps to turn us into a nature reserve. We’re an oasis. The drought would go against me if I planted more almond trees or corn”.

With such a simple but overwhelming logic, Paco, agrarian by trade, used the Cartesian part of his brain to list everything his estate offered and then, on the basis of this inventory, plan its restoration and use. The other part of his brain, the emotional side, then swung into action with every step he took on his land, every discovery he made, each decision he took; it became the real driving force of his whole initiative. “Spearheading research makes you more discerning, more awake. When you discover something new you didn’t know you had, like an orchid for example, it’s impossible not to be moved and think of the land as the giver of yet another gift”.

The estate, given over to nature tourism and almond- and olive-growing, is not yet paying its way. He realises he’s got to break even soon or go under but he is still sure his project will come good in the end. “It’s unstoppable now: I’ve got the natural project and the public demanding it”. His faith is moving and convinces everyone who hears it.



A growing clientele

Paco designs and makes gardens for local gated communities; his business is targeted at well-off English people who have come to Spain in search of a better quality of life. “They’re looking for an authentic, traditional, natural and healthy product. They’re convinced that the longevity of Spanish people comes from our environment, our diet and our lifestyle”.

Almost without wishing it, he had identified a public demanding just the product his family estate could offer. It was just a question of sounding out its possibilities thoroughly and marketing products to suit. For example, he has organised an almond festival where visitors can find out how they are grown, how they are used and even try a dish cooked with almonds. Then he sells off the estate’s almonds at 12 euros a kilo, packaged in a neat-looking bag with a traditional Murcia recipe thrown in. Wholesalers would pay him no more than four euros a kilo. It’s a question of always tagging on added value. “They want wildlife, I’ve got wildlife; they want healthy exercise, I’ve got walking landscape to spare. We create trails of varying difficulty with interpretation points; we teach them to find out where they are, the use of each thing they see and its history. We help them learn about nature in an entertaining and appealing way”.

A very profitable agrarian estate

Helped by socioeconomic circumstances, the estate was very profitable as a cereal farm from the end of the nineteenth century to 1950, when wages, the changing economy and the drought forced the owners to plant almond trees to replace the traditional cereal crops. A slow decline then set in until the nineties, when the almond orchard was discontinued. Since then the estate and its house have become a summer home for the family. Fifty percent of the estate is woodland or scrub of some sort and the rest is arable land. He has 40 hectares of almond trees, some carob trees and figs and also conserves 300 olive trees whose olives are turned into oil in the olive press.

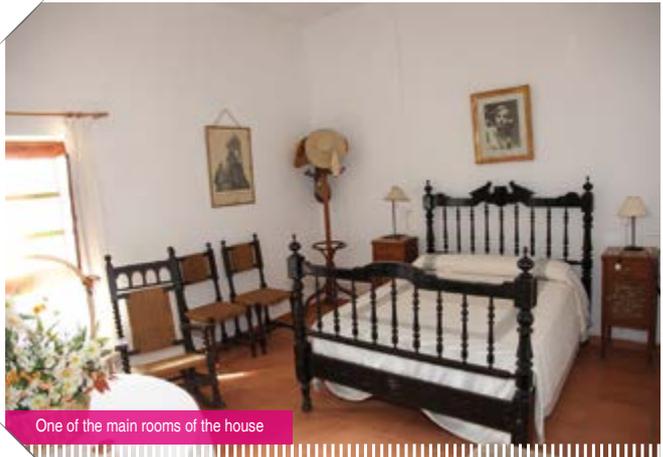


The hide gives a good general view of the whole farm, with woodland to the left, the almond orchard in the centre and, at the top, the farmworkers' lodge that is now going to be restored as a small rural hotel.

Paco has opted for a type of client and tourism that chimes in with his own understanding of what his land offers: "the estate's first customer is me".

The relationship he has struck up between nature and tradition, engendering health and wellness, is now bearing its fruit. In a region like Murcia, where some economic sectors have stigmatised the Natura 2000 idea as a brake on development, Paco and his Las Torrecillas estate proves that living in a Nature 2000 site is no problem at all. On the contrary, it is an opportunity if looked at the right way. "My project would not make the same sense if it wasn't in a protected site".

Paco ploughs back all he earns into the estate. All his decisions and initiatives are steeped in the lesson passed down by his grandmother and his passion for the land. "You've got to invest in the estate's nature because that's its future, its driving force. Without woodland there would be no sparrow hawks, no mushrooms and no water. You've only got to help her along for her to continue offering you what she gives you today".



One of the main rooms of the house

CAMELEERS IN PARQUE NACIONAL DE TIMANFAYA, LANZAROTE

Site: Uga (residence) and Parque Nacional de Timanfaya (activity)

Activity: Camel rides. 288 licences have been granted, one per camel. At present there are 27 families trading in this business though the number peaked at 40

Protection Scheme: SPA La Geria ES0000100 and SCI Parque Nacional de Timanfaya ES0000141

Cameleers in Lanzarote go back a lot further than just giving tourist rides in the Parque Nacional de Timanfaya (National Park of Timanfaya), a registered Natura 2000 site. This activity served as a lifeline at a particularly desperate time for island life. Until the middle of last century camels indeed played a key role in the economy of the two most desert-like islands, Lanzarote and Fuerteventura.

They were brought in from Africa in the fourteenth century due to their extraordinary drought resistance. For centuries they were the best draft animal on the islands' farms and even a means of transport. A family's wealth at that time was largely measured by the number of camels it had. At the beginning of last century there were still two thousand camels on Lanzarote. "Now there are 288, corresponding to the number of licences granted by the Ayuntamiento (council) of Yaiza". Marcial Viñoly belongs to one of the 27 families that live off this business in Uga, a village of 800 inhabitants near Yaiza falling within the "pre-park" buffer zone. Marcial's father became a cameleer in 1970, twenty years after his neighbour Guillermo Bravo began the trade. It all started pretty much by itself. "In the fifties the taxi drivers would bring in tourists from the towns and ask the farmers to camel them up to Timanfaya to poach some eggs in the volcanic pools". It is easy to imagine just how exotic a venture of this type must have seemed to the foreign tourists of that time.

And the business just blossomed from there. Then came local regulation of the businesses with permits and control of visits after creation of the National Park. But it is still a private business. "We don't receive any



Timanfaya receives a million-and-a-half of visits a year.

grants. From my point of view they're not a good thing. This is an activity that works in its own right. Mind you, we were here before the national park was created and what we want is to continue working" says Marcial Viñoly. In fact, the cameleers are part of the island's living history, marked by the eruptions of 1730 and 1824. The first buried nine towns under the lava and transformed the whole island; the second caused famine and mass migrations. And ever since then the landscape has been shaped by the varying farm-working techniques on the volcanic earth and the work with the camels.

Marcial is a staunch defender of the National Park and is quite clear about the protection and aid it offers. "It works to our benefit, of course it does. We're in a spot where we're seen by one hundred percent of the tourists who come to the park, and between 50 and 60 percent of them end up having a camel ride". Factor in Timanfaya's million-and-a-half visits a year and this adds up to a tidy sum.

It is true that their business was built up without any sort of environmental awareness, because no such thing really existed back then. But today the cameleers of Timanfaya are a sustainable, low-impact source of income, keeping alive some of the history of this island. Their business is an emblem of tradition and a source of pride for the locals.



The camels enter the park on an exclusive 1 kilometre track that crosses a particularly vulnerable habitat, which would be thrown out of kilter by the least landscape change. Timanfaya is a unique ecosystem and a natural laboratory of the first phases of post-volcanic life. Most of the colonising species are lichens and invertebrates but there are also nearly 200 species of vascular plants. Birdlife along the coast is also outstanding, including the singular “guirre” or Canary Islands Egyptian Vulture, one the main reasons it was declared a SPA in the first place.

Cameleer with tourists.



TRAILBLAZING CAMPSITES ON THE COAST OF GIRONA

Name: Camping Castell Mar
Site: Castelló de Empúries, Girona
Area: Five hectares
Protection Scheme: SPA and SCI Aiguamolls de l'Alt Empordà ES0000019

Name: Camping Castell Montgrí
Site: L'Estartit, Girona
Area: 23 hectares
Protection Scheme: Bordering on the SPA and SCI El Montgrí-Les Medes-El Baix Ter ES5120016
www.campingparks.com

Jordi Sargatal, current general manager of Grupo Mascort, remembers as if it were yesterday the day on which, 30 years ago now, he met Ramón Mascort, “a sui generis entrepreneur if ever there was one”, he stresses. “At that time I was running the Parque Natural dels Aiguamolls de l'Empordà, and Mascort came to see me because one of his two campsites fell within the perimeter of the park. The funny thing is he was much more interested in finding out about the otters than asking me about the possible consequences for him of running his commercial activity within a protected site”. And that is really where everything started. They soon became fast friends and began to collaborate on ventures such as creating a reputed publishing house specialising in nature, Lynx Edicions. Nowadays their working relationship has become even closer since Jordi Sargatal is running Grupo Mascort, which includes two trail-blazing campsites on the coast of Girona.



The Parque dels Aiguamolls de l'Alt Empordà is one of Catalunya's biggest wetlands. It is especially bird rich with 323 species recorded, earning it the distinction of Special Protection Area (SPA). El Montgrí boasts a singular geology of caves, pit caves, continental dunes, etc.

Birds'-eye view of Castell Mar campsite





The campsites offer environmental education activities.

“Environmental seduction as the first step to environmental education”

Sargatal is convinced about the importance of environmental education “at all levels” and passionately explains that “if anyone thinks a campsite is not the right place for environmental education we prove them wrong. There’s a challenge in every little thing we do”.

Pesticide use, for example, has been eliminated in both campsites. “If anyone complains about the ants under their bungalow, then we explain to them, especially to the children, the marvellous world of these insects and their importance for life on the planet. It’s the kids, thrilled to the gills, who then convince their parents”.

There is an animal farm where the children learn and enjoy “touching them”; they are also encouraged to muck in by making nestboxes. “Many children come back next summer to check out which birds have bred in their boxes”.

And the adults? “We invite the adults to cross the magic door”, says Sargatal intriguingly. “This is a special door opening on the natural sites that surround us; we accompany them and fill them in on the way. You should see their faces when they discover such a staggering nature on their doorstep. They come back changed. This is all part of our work”.

Sargatal is now mooted a singular project for the Castell Mar campsite. This is the one that falls within the Parque dels Aiguamolls, amidst bird-rich wetlands that have earned it Natura 2000 status, horse-grazed meadows and a sweeping beach of virgin sand. “The idea is to remove the perimeter wall and replace it with a light wooden fence. The bungalow walls will be made of glass. The aim is to blend us into the landscape as much as possible so the people inside can see the birds and other wildlife roundabout”, he explains, adding as an afterthought, “a campsite with bespoke birdlife”.



A birdwatching group.

EL RINCÓN DE LOS CEREZOS IN LAS VILLUERCAS, CÁCERES

Name: El Rincón de los Cerezos

Site: Berzocana, Cáceres

Activity: Organic farming, educational and training workshops, rural tourism

Area: 15 hectares

Protection Scheme: SCI Sierra de Cabezas de Águila ES4320035
<http://elrincondeloscerezos.blogspot.com.es>

Some people just happen to live in protected nature sites; others make a beeline for them. The family formed by Carmen, Mario and Andrés took this leap at the change of millennium. “Both Carmen and I were working in the environment-related public sector”, explains Mario, “and we were becoming increasingly sure about what we wanted, i.e., to live in close, harmonious and sustainable contact with nature and show this to be possible even for a normal family”.

Carmen and Mario ploughed their savings into a plot of land in Las Villuercas in the province of Cáceres. Fifteen hectares of land on the oak-cloaked slopes dropping gently down to the north from the heights of Sierra de Cabezas de Águila. “It’s small but it fits in with our philosophy of life; you can have all you need if you exploit your possibilities in a sustainable way”, argues Mario. And these particular 15 hectares certainly go a long way: in the Rincón de los Cerezos live the Morales family itself plus a 50-head herd of breeding ewes, four cows, twelve goats, five horses, 30 chickens and a hundred beehives. There is also a four-hectare cherry orchard; some of these trees already existed when they bought the land but grown on a conventional orchard basis. They topped up the original orchard with another thousand trees, mostly cherry trees plus another fifty species of fruit trees “suited to the eco-environmental conditions of the land”.



Carmen and Mario, owners of El Rincón de los Cerezos.

“If I’m asked if this is economically sustainable from an input-output point of view, I’d answer yes, we can live from it but only on an organic farming basis not as a conventional farming set up. And of course there is also the factor of what each individual needs to live well”. Listening to Mario brings to mind the banner watchword on his website: “No Wi-Fi, no TV, no microwave ...” And you wonder if some prospective clients might be put off by the spectre of such an austere lifestyle. But in fact there is nothing more comfortable and easy-going than the atmosphere of this unique place, part farm, part rural-tourism establishment. “Our guests are above all couples with children, because we let the kids take part in our daily activities. Others who come quite often are people who are already interested in organic farming, because we run information workshops. This helps to top up our income”.

The farm has a standalone dwelling, a bioclimatic house, rented out as a self-catering cottage. But there are other surprising features, like an underground cheese dairy, a Mongolian Yurt and a Mauritanian Jaima. “In Mauritania we collaborate in a project to help local people develop their own survival strategies from organic farming methods”. Mario concludes “we eat healthily, we enjoy watching the black storks, we warm ourselves at a living fire, we talk to interesting people. What could be better than that?”.



Start-up costs

The land cost about 80,000 euros. The livestock, the beehives and the new plantations were all financed by non-repayable grant from the Extremadura government as part of its scheme to encourage young farmers back onto the land. The self-catering cottage was built from an old byre on a 35% aid from PRODER funds and the rest of the money came from a Triodos Bank (ethical banking) loan to a value similar to the cost of the land. This loan has now been paid back.

“Certainly a lot of the work we did ourselves, but the facilities and constructions for public use had to be certified by professionals, with much higher costs, of course”.



The farm has looms, a bee-keeping workshop, a gazebo for holding meetings and a library.

CRANE-RELATED TOURISM AT LAGUNA DE GALLOCANTA, ARAGON

Site: The lake straddles the provinces of Teruel and Zaragoza, taking in Bello and Tornos in the former and Gallocanta, Las Cuerlas, Berrueco and Santed in the latter

Activity: Ten or so rural hotels and self-catering cottages around the hinterland of the lake

Protection Scheme: SPA Cuenca de Gallocanta ES0000017 and SCI Montes de la Cuenca de Gallocanta ES2420111

www.amigosdegallocanta.com

“I remember it perfectly. It was February 1993 when we opened the Laguna de Gallocanta information centre. No official opening ceremony could be held because of the grave problems with local farmers. I had been hired to run it, so they just gave me the keys and said, ““open up””, and that was that. When I got there the lock had been sealed with silicone”. This anecdote recalled by Javier Mañás gives a good idea of the mood back in the late eighties and during a good part of the nineties, when the soaring number of cranes coming in to roost at the lake put local farmers on a war footing.

Until the seventies the lake called Laguna de Gallocanta was an outstanding water-bird wetland but the mass influx of cranes did not occur until it was brought progressively under various protection schemes. Fifty three percent of the area protected under the Natura 2000 network is arable land.

Those years of strife were only brought to an end by the agri-environmental aid packages agreed in 2000. But even in those difficult times Javier Mañás was voted in as mayor of Gallocanta “winning a majority because I’m a hometown boy”. At the same he was setting up a specialist hostel for “grulleros” (crane watchers) called Allucant. “Today I can safely say that Gallocanta is proud of its lake”.



Javier Mañás.

The importance of European projects

The development of crane-related tourism in Gallocanta was driven by three key figures: firstly, Javier, who was a trailblazer with the crane-watchers hostel in 1995; secondly the Local Action Group Adri-Jiloca-Gallocanta, responsible for three successive EU-funded projects; and thirdly the Asociación Amigos de Gallocanta (Friends of Gallocanta Association), a cultural organisation founded in 2002 by six local residents including Javier himself.

The first of the LEADER projects initiated in 1997, going under the name of GRUS, brought them into contact with researchers and farmers from other European countries, enabling them to take part periodically in international congresses on this migratory bird, one of which was organised in the village itself. This project also spawned the Crane Festival, held for the first time in 1999 and then every single year since.



The number of cranes passing through and wintering at Gallocanta never stops growing. The latest counts came out at 50,000.

“Grassroots support was essential”

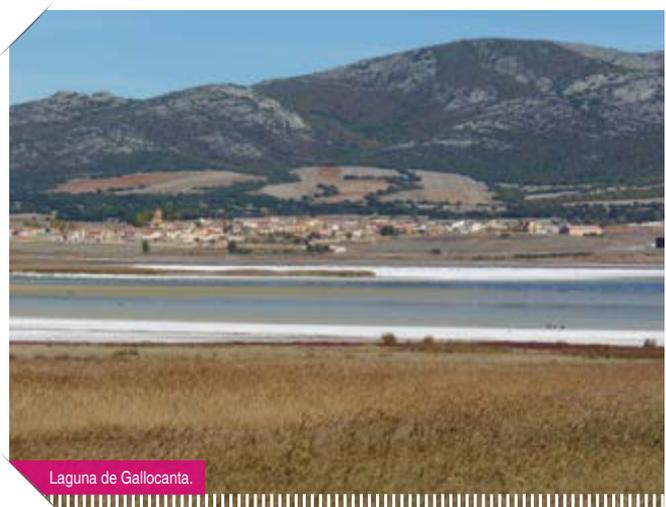
One of the people working on that first project was Pablo Vicente. He tells us that “they were sure about the benefits cranes could bring to the local area but also that grassroots support was essential. At first local residents looked askance at the inrush of crane-watching tourists and were still dragging their feet when the first Festival was put on. But the fact we were locals ourselves worked in our favour. Here we’re all one big family”. For this reason every Crane Festival has placed a special stress on bringing tourists into contact with local producers, by running a handicrafts market in Gallocanta square.

Although the cranes have benefited local farmers in the form of agri-environmental compensation, “it’s been the tourism sector that has been transformed most. Before Allucant and the Crane Festival the local accommodation possibilities were very basic and old fashioned. Now there are self-catering cottages, a refitted hotel given the new name “Las Grullas” (“The Cranes” in Spanish) plus a new hotel, Secaiza”. This transformation was largely driven by the media, according to Pablo Vicente: “featuring in TV programmes and news bulletins as a shining national and international example of conservation raised the locals’ self-esteem and brought in even more tourists”.

The sector is still finding its feet, however. Outside the crane season both the Albergue Allucant and the Hotel Secaiza strive to offer other tourism attractions, but they are the exception. In most cases the tourism establishment is not the owners’ main livelihood; it is seen rather as top-up income.

A singular lake

With an area of 15,221 hectares included in the Natura 2000 network, the Laguna de Gallocanta boasts the title of Western Europe’s biggest saline lake. It has no outlet to the sea and is fed only by rain and aquifers, so it sometimes dries up completely. The salinity prevents any fishlife but gives rise to interesting communities of halophile plants. Its strong suit is birds, with over 220 species recorded and over 100 regular nesters, water birds to the fore.



Laguna de Gallocanta.



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Positive Natura 2000 Experiences

