



Menorca Preservation Fund

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1. CONTEXT

The Balearic Islands are an archipelago in the Mediterranean, east of the Spanish mainland. Scientists regard these islands as one of the best-kept marine environments in the Mediterranean region. However, its ecosystems face significant pressure, due to many reasons including; recreational and industrial overfishing, mass tourism, inappropriate sewage systems, water consumption, boats anchoring in vulnerable areas, pollution from plastics and other materials etc.

Menorca is the furthest east of the islands and is often called the jewel of the Mediterranean due to it traditionally being more low-key than its neighbours, Mallorca and Ibiza. This has often resulted in Menorca being side-lined in terms of funding and legislative priorities allocated from the Govern Balear (based in Mallorca) to protect its natural ecosystems and biodiversity.

Menorca has an approximate population of 90,000 people and a surface of 700km². However, during the summer months, the population rises to over 200,000 people. The island is divided into 8 administrative authorities (town halls) and these are governed by the Consell Insular de Menorca (CIME) who is in turn governed by the Govern de les Illes Balears. The Govern de les Illes Balears (GOIB) is responsible for making legal decisions affecting education, health, water, renewable energy and marine conservation, amongst others.

However, with regards to the preservation of Menorca, the current Consell Insular is taking on a much more hands-on approach as they feel that the decisions affecting the island should be made, or at the very least informed by, the islands local government and town halls. They are carrying out research, funding studies and putting together working groups in order to empower Menorca with the knowledge of what is best for its preservation and long term sustainability. In addition, they hope that this increased knowledge, will help them argue against always being last on the list of priorities from the Govern's point of view.

Menorca also has a strong tradition of rural landscapes and agriculture activities and this sector owns approximately 75% of the land but at present only contributes to 3 or 4% of the economy. It is home to an overwhelming diversity of Mediterranean habitats that host endemic plant and animal species unique to the island, some of which are in danger of becoming extinct. Menorca also lies on an important bird migration route between Europe and Africa, which contributes to the variety of bird species one can see at different times of the year.

In 1993 Menorca was declared a UNESCO Biosphere Reserve. Biosphere Reserves are declared where there exists an important natural and cultural heritage and where society has accepted an economic development compatible with the conservation of nature. A reserve of the Biosphere is an agreement of man with his natural surroundings¹ and as a Biosphere Reserve, Menorca is part of the World Network of Island and Coastal Biosphere Reserves, which is a UNESCO MAB Programme aiming to foster sustainable development on islands and coastal areas and promote adaptation and mitigation strategies on climate change.²

Menorca was awarded the Biosphere Reserve status in recognition of the diversity of its Mediterranean landscape and the animal and plant species found exclusively on the island, some of which are in danger of extinction. Other factors that contributed to the award include the island's rich archaeological and ethnological heritage; the harmony arising from the sensitive economic and

¹ <https://www.menorca-net.co.uk/menorca/biosphere-reserve.php>

² <http://islandbiosphere.org/portal.aspx>



cultural development in Menorca's small-scale society, along with the traditional rural countryside and general landscape present over a large part of the island which is highly appreciated for its beautiful scenery.

After the declaration of the Biosphere Reserve, the *Consell Insular de Menorca* set out the following environmental goals:

- **Support the preservation of activities that maintain traditional landscapes and avoid those which may be to their detriment.** The *Pla Territorial Insular* (Insular Territory Planning), or PTI, has been approved to this end. It classifies territories with the aim of safeguarding sustainability and regulating urban expansion. The PTI is currently being revised and in the meantime, the *Norma Territorial Transitòria*³ (NTT) that was put in place by the PP in 2015 is the document that regulates what activities can and cannot be carried out. As part of this goal, proper agro-environmental practices are also encouraged through the *Contracte Agrari de la Reserva de Biosfera* (Agricultural Contract of the Biosphere Reserve).
- **To substantiate the preservation of natural ecosystems including their indigenous species of flora and fauna.** To this end, campaigns have been developed for the eradication of invasive species of flora and for the active protection of threatened species as well as unique habitats, like temporary ponds.
- **Increase the level of knowledge regarding natural and cultural resources.** Research and investigations of natural and archaeological heritage is carried out for this purpose.
- **Define strategies for sustainability at a local level.** Each municipality has its own *Agenda Local 21* (Local Agenda 21) and *Pla d'Acció Ambiental* (Plan for Environmental Activity).
- **Manage environmental issues related to the coastline and beaches,** which are the foundation of tourist activity, especially through the protection of the sand dune and marine ecosystems.
- **Minimise the environmental impact caused by everyday human activity.** Waste materials are separated and treated according to their classification: organic, refuse, paper, glass, or packaging.
- **Develop an outdoor sustainability laboratory.** Hence, the *Observatori Socioambiental de Menorca* (OBSAM, or Socio-environmental Observatory of Menorca) has been created. It gathers and analyses information relevant to the biosphere reserve.

The most notable habitats on Menorca are the gullies, caves, wetlands made up of ponds, dune systems and coastline as well as approximately 220 species of birds, and 1000 species of plants (60 of which are endemic).⁴

Within Menorca's main economic industries, we find a very diversified quality tourism, together with industrial activities, such as shoe and jewellery-making, and dairy farming.

Within the tourism industry, the Consell have recently decided to take a new approach to this way of life in Menorca with the aim of better aligning the industry with the islands natural resources and therefore making it sustainable for Menorca's patrimony. As part of this initiative, Menorca has been selected to take part in the new internationally funded DestiMED programme. DestiMED is an EU-funded cooperation project of the Interreg Mediterranean Sustainable Tourism Programme. The

³ In October 2017 the NTT was modified once more but the final PTI is still in process.

⁴ <http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/biosphere-reserves/europe-north-america/spain/menorca/>



project brings together a network of 13 protected areas in six Mediterranean countries to collectively develop, manage, and promote ecotourism. DestiMED builds on the success of a previous project called the MEET Network (Mediterranean Experience of Ecotourism).

In terms of Menorca's topographical characteristics, it is mostly flat with the highest altitude at Monte Toro (358 m), which is in the middle of the island. Although the seasonally flowing torrents and ravines predominate, two low discharge courses of permanent water are of special ecological interest. The climate is Mediterranean sub-humid with a mean annual temperature of some 17°C and mean annual rainfall ranging from 450 to 650 mm.

Frequent and very strong winds have an impact, especially on the North coast. The well-conserved rural landscape is dominated by an agro-forestry mosaic, comprising a wide mesh of dry stone walls, closed-in fields and country houses. Coves, cliffs and beaches are to be found along the coast, still virgin in much of the island.

The flora includes endemic species such as Peonies and diverse species of thorny shrubs forming pillows (socarrell, which includes *Launaea cervicornis*). Among the fauna, mention should be made of the large colonies of sea birds gathering in S'Albufera des Grau, such as the European Shag and an abundance of birds of prey such as the Booted Eagle and the Red Kite.

All of this has contributed to Menorca becoming part of the Xerxa Natura 2000 network, which is a key part of EU nature & biodiversity policy. It is an EU wide network of nature protection areas with the aim of assuring the long term survival of Europe's most valuable and threatened species and habitats. These areas are not strict nature reserves but the emphasis is on ensuring that they are managed correctly both ecologically and economically in order to guarantee their sustainability.

The greatest part of the Natura 2000 areas in Menorca coincide with natural areas of special interest (ANEI), declared in 1991, in order to protect different locations from urban development pressure, in particular along Menorca's coastline. Furthermore, it includes four inland SPA and several coastal marine areas.

As a whole, the Natura 2000 Network in Menorca covers 40,659 hectares, 28,511 of which are on land.⁵

There are numerous different Protection Classifications held by Menorca. To name a few:

- Natural Park
- Special Areas of Natural Interest (ANEI)
- Special Areas of Conservation (SAC)
- Special Protection Areas (SPAs)
- Specially Protected Bird Area (SPBA)
- Marine Reserve
- Particularly Interesting Natural Area (PINA)
- Protected Megalithic Archaeological Monuments and Findings, representative of the Talayotic culture.

To date there are numerous environmental projects underway but there is ample scope for further work, as well as continued support for the various ongoing projects. Based on those I have spoken to, it seems that the current governing bodies in the Consell (PSOE, Podemos & MES) are supportive of pushing forward with environmental projects on the island but do not have the capacity to manage or

⁵ <http://xarxanatura.es/>



fund these alone. Therefore, the ideal solution would appear to be a combination of public funds and/or expertise along with private funds and project management, working with networks of volunteers. All of my meetings with the local government and administration have been very positive and our Foundation is being well received which is often the first barrier to get past.

2. KEY ENVIRONMENTAL ISSUES IN MENORCA

a. Marine conservation

At present, Menorca has one marine conservation area, on the north of the island. This area covers 5085 hectares and was declared in 1999. The area is characterised by its natural beauty, state of conservation and in particular for its waters, as very close to the coastline its depths reach approx. 30metres, resulting in a significant variety of habitats. In the past, studies have found there to be more than 35 types of communities with approximately 628 benthic zone (seabed) species, most of which are red algae, or Rhodophyta, fish and molluscs.

In addition, one of the areas within the marine reserve which is considered to be severely damaged, is an area inside the small fishing harbour of Fornells where the excess of aquaculture (underwater farming) that was carried out at the end of the 80's, had severe negative consequences on its habitats. Therefore, its inclusion in the marine reserve had the aim of allowing its natural regeneration.

However, due to the financial crisis and lack of funding, it has not been possible to monitor the situation in any of the Marine Reserve since 2011, when the last study was carried out. At that time, the studies already demonstrated that the situation underwater was worsening with fish populations decreasing and flora being damaged.

This issue resonates across Menorca, as despite there being legislation in place and several areas being placed under protection, there is very little monitoring and enforcement due to the lack of resources allocated. These specific issues affect Menorca more than the other Balearic Islands. For example, during the summer of 2017, Ibiza had 6 patrol boats assigned to the island in order to control and monitor illegal anchorages, fishing etc. Menorca was assigned 1 boat to cover the whole island.

In addition to the Marine Reserve, there are currently two very significant processes underway within the Consell Insular de Menorca and the Balearic Government. Both of these are vital to Menorca's Marine conservation and will play key roles in the development of this sector, as well as demonstrating the importance of this area for the local government.

At the beginning of November 2017, the Consell approved the proposal to make the Isla del Aire and its surrounding waters, another Marine Reserve. The proposal has also now been approved by the Govern Balear and therefore the process is underway. The petition is supported by the local fishing community, who have been essential in getting the project proposal through, and is essential due to the areas extensive biodiversity, the decrease in the fish populations in the area and the over-crowding of its waters during the touristic high season.

In addition to this, on the 20th of February 2017 the Environmental councillor for the Consell de Menorca, Javier Ares, initiated a proposal to UNESCO to increase the Biosphere Reserve area to include Menorca's territorial waters, as at present the Biosphere Reserve declaration only covers Menorca's land.

The Consell has carried out an extensive project, at UNESCO's request, to justify this new proposal and its parameters. The new Biosphere Reserve would include the whole of the island and 12 miles out to sea, which is where Menorca's territorial waters end and international waters start.

The approval of this process would enable the local Council and key stakeholders to put in place an essential marine conservation project in order to protect and restore Menorca's marine biodiversity.

In addition to this, the Leader Menorca Association has sought to take over the management of the FEMP (Fondo Europeo Marítimo y de Pesca), which is the new fund that follows the EU's maritime and fishing policies and replaces the former European Fisheries Fund. This would enable the Leader association to promote a balanced and integrated development of both land and marine conservation.⁶

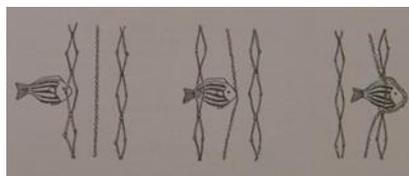
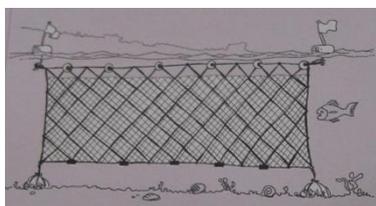
At present, the fishing industry in Menorca is comprised of about 60 boats (officially) from three Fisherman's Associations, one in Mahon, one in Fornells and one in Ciutadella. It is based on coastal fishery, where the catch is brought back in to port on the same day it is caught, either to be sold or frozen. All three of the fishing associations are keen that both the Marine Reserve at the Isla del Aire and the expansion of the Biosphere Reserve to Menorca's coastal waters take place, because they are very aware of the current damage suffered by the fish populations and the resulting negative consequences on their livelihoods.

Currently the professional fishing community is very much controlled. However, over recent years recreational fishing has become a much bigger problem because, although these fishermen must have licences, they don't have to declare what or how much they catch.

There are three categories within the fishing professionals on Menorca, which are:

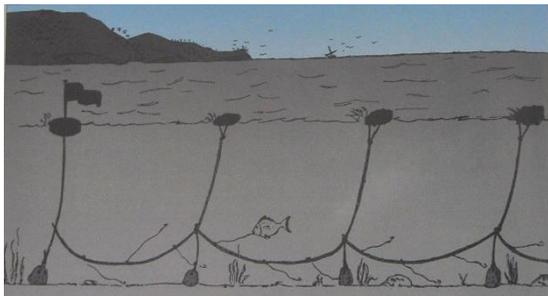
- 1) **Small-scale fishing:** This is the artisanal fishing using small boats and on which they tend to use reduced dimension fishing gear and, in general, are able to be more selective when fishing and have little impact on the seabed. This category includes the majority of the islands fishermen, who are mostly dedicated to fishing with trammel nets and longlines.

TRAMMEL LINES

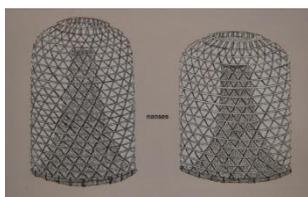


⁶ <http://gdp.leadermenorca.org/contingut.aspx?idpub=8727>

TRAWL LINE OR LONG LINE

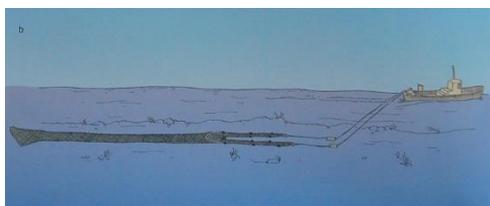


FISH TRAP



- 2) **Trawling:** These are larger dimension boats than the artisanal ones. They fish by dragging a funnel shaped net along the seabed. The net is fixed in position using two large dimension doors via which the net is held open. This technique is not very selective and generates much waste, meaning that species that are too small or lacking in commercial interest are often caught and then returned to the ocean, already dead, this is known as bycatch. The island currently has 7 fishing boats of this type.

Trawlers usually have two fisheries, one by the coast, on the continental platform, where they mostly catch fish, and another talus, in deeper waters, where shellfish can usually be found.



- 3) **Shell fishers:** These are the professionals that are solely dedicated to fishing for shellfish, either through catching or breeding them. There are few shellfish fishermen on the island. Some families have mussel harvests or mussel farming grounds, inside Mahon Harbour, and others re-collect them from coastal areas using artisanal tools.

It is clear that the Marine conservation sector is a key area that will require much work and support if it is going to recover the fauna and flora that has been lost due to the lack of protection it has received over the years. The fishing inspector for the Consell's environmental department informed us that to date in 2017, no live species of the Nacra (*Pinna Nobilis*) have been found and they believe that these have now become extinct on Menorca, where once they were in abundance. In addition, the traditional menorcan "Cranca" crab, used for the paellas can also no longer be found here.



Despite the above, all the experts I have spoken to feel strongly that with the correct conservation projects in place and the essential support of the government institutions, Menorca could fully recover its underwater habitats and enhance its current biodiversity.

The key is to getting the research done in order to understand the situation underwater and then be able to properly assess what needs doing.

OBSAM have proposed carrying out a Fish population study, for which they have asked the MEPP for funding. Since the financial crisis, all research studies into fish population were stopped and none have been carried out since 2011. It is essential that this research is done in order to establish what measures need to be put in place to recover/protect the endangered fish populations in the area.

In addition, GOB is carrying out a fresh water turtle protection campaign and last May they marked 97 turtles on Menorca. Another study of the turtles is planned for the autumn and after that they aim to put a conservation plan in place to protect these animals and their habitats.⁷

With regards to marine turtles, according to the fisheries department of the Consell, Menorca was once a popular breeding area for Marine turtles. However, this has not happened for many years and in order to re-introduce turtle breeding areas in Menorca it would be necessary to bring unhatched eggs to Menorca from Turkey or Greece. An action which would have to take place with the agreement of keeping certain beaches or areas exclusively for this purpose.

Other project ideas also include:

- supporting the local government in identifying the areas needing protection from boats anchors and placing buoys down to protect the seabed and fish populations.
- Collaboration with ECOALF and local dive schools for sea bed clean ups.
- Collaboration with the IEO (Instituto Oceanográfico Español- Spanish Oceanographic Institute) on re-integration of the local crab species which can no longer be found here.

⁷ <https://menorca.info/menorca/local/2017/607357/gob-marca-tortugas-agua-menorca.html>



b. LANDSCAPE CONSERVATION AND LOCAL FOOD PRODUCTION

In this sector, there are two key organisations, GOB and LEADER +, both of which are strongly committed to carrying out actions aimed at rural development and the revitalization of Menorca's economy in a more sustainable manner, for example, GOB's Custodia Agraria project.⁸

Menorca has a strong tradition of rural landscapes and agriculture activities and this sector owns approximately 75% of the land but at present only contributes to 3 or 4% of the economy. Between both GOB and Menorca's Leader association, they have been working towards a much needed model for sustainable farming.

The LEADER programme, is a European initiative that started in 1988 as part of their rural development policies. This innovative programme was then started in Menorca in 1991. Due to its positive impact on Menorca, in 2001, the LEADER Association for the island of Menorca was created. This non-profit organisation is responsible for managing and carrying out the European Union's LEADER+ initiative along with other initiatives contributing towards LEADER's goal.

Over the past 7 years this programme has had a significant positive impact on the activation of social and economic development in rural areas. This has been due to the diversification of its farming activities, the recovery and conservation of the cultural and environmental patrimony and the continued number of projects and funding carried out in this area, from both public and private investors.

In addition, the 2014 to 2020 Leader programme strategy, as a key part of the RDP (Rural Development Programme) in the Balearic Islands, focuses on improving the quality of life in rural areas and diversification of the rural economy with a territorial approach, placing a particular emphasis on innovative and pilot projects.

Possible projects:

- Collaboration with GOB on the Custodia Agraria project for:

1. Improvement of rain water catchments and usage, and recovery of traditional rain water collection tanks/wells (old aljibes)
2. Adaptation of livestock and farming to climate change
3. Volunteer participation activities and training
4. Creating a booklet of experiences on activities carried out to the adaptation of climate change
5. Promotion of local produce coming from the *custodia agraria* project farms.
6. External coordination
7. Environmental education

- Risk Reduction in Fire Hazards gaining the participation from locals by increasing awareness and understanding of the risks as well as creating a network of volunteers to coordinate events in the case of a fire.

⁸ <https://www.gobmenorca.com/custodiaagraria>



- Improved promotion and communication on conservation of Menorca's natural habitat. Menorca is blessed with a large amount of natural footpaths all over the island, including the Cami de Cavalls (original horse trail going around the whole island). There is a lack of coordination in managing these areas when it comes to both conservation, waste management, signs and management. It could be beneficial to Menorca's countryside to coordinate the management of these paths, by creating a network of volunteers, in order to ensure that proper care of the areas is being taken and to lobby for basic facilities to be put in place.

Fauna Silvestre – This is GOB's wildlife animal rescue centre which the foundation visited in September 2017. It is mostly run by volunteers but they do a great job and need funding for a few improvements to the installations. They have separated the costs per area:

1. A new cage/area for the birds that can't recover enough to be set free.
2. A new system of solar powered pumps for the ponds where the turtles are kept.
3. A whole load of new material in terms of printed leaflets, banners etc. They carry out educational projects with the schools and the area where they do this is very tired, the information banners are broken and they are short of printed materials.

- Cala'n Porter Ravine permaculture project. To be discussed with GOB.

LOCAL FOOD

Food products brought to the island from the mainland are often cheaper due to mass production, despite transport costs. Therefore, encouraging the use of Menorca's own products is a challenge.

However, there has been a number of initiatives in recent years to encourage the use of local products as much as possible. Of particular significance is the Consell de Menorca's decision to become part of the Milan Urban Food Policy Pact⁹ and the "Compromis de Mongofra" of 2015. Javier Ares, the environmental councillor is aiming for the whole of Menorca to adhere to the Milan Agreement. As part of this objective, the Consell is using 2017 to work on a Sustainable Food Plan, with this research having been funded with 20,000€ from the Fundació¹⁰ Daniel y Nina Carasso.¹¹

One of the main pillars of being a Biosphere Reserve is food production and therefore the Consell feels it is essential to create public policies, committed to the primary sector and which help us work towards a sustainable island. Through this, the aim will be to work on diversifying the economic sector and placing strong support on local food as a key element to our economy.

With this in mind, the Consell and the Town Halls have committed to developing transversal strategies that are in line with the food policies based on the Milan Pact, as well as creating a space for participation between all the relevant actors within Menorca's food chain, in order to implement the strategy.

In addition to this, approximately two years ago, OBSAM, Menorca's Socio-environmental Observatory, with funding from LEADER Menorca and IME (Menorcan Research Institute), started up the Agroxerxa project. This project aims to promote the whole of Menorca's primary sector products via one website, with information on its farmers and fishermen as well as the retailers and restaurants

⁹ <http://www.milanurbanfoodpolicypact.org/>

¹⁰ <http://www.fondationcarasso.org>

¹¹ <http://cime.es/Contingut.aspx?IDIOMA=2&idpub=30158>

where one can find this produce. This online catalogue includes products from both land and sea and not only aims to promote our local produce but to create an online network between the producers and the businesses wishing to use local produce¹².

In addition, this year for the first time, in April, the Consell launched the local food Expo in Menorca, *Fira d'Arrels* which was a local food and cuisine trade show where more than 30 local producers provided over 3000 visitors with the opportunity to learn about their local produce, taste different products and participate in cooking workshops. All in a bid to promote the “KMO” concept of maximising the use of local produce.¹³



MENORCA'S LOCAL FOOD PRODUCTS:

Local **herbs** are commonly used amongst the locals and in particular, camomile (*Santolina magonica*) which is endemic to the Balearics and thyme, rosemary, mint or pennyroyal.

Meat - The island's longstanding stockbreeding tradition has led to the production of high quality meat and in particular meats produced from stock being fed naturally through grazing. In addition, the efforts made to protect the local livestock breeds have enabled Menorca to have a unique product for example, the Menorcan red cow, which is protected under the Associació de Ramaders de Bestiar Boví de Raça de Menorca (Menorcan livestock breeding association). Menorca's native sheep should also be highlighted, as they are controlled by the Associació de l'Ovella Autòctona de Menorca (Native Menorcan Sheep association) in order to obtain the highest quality meat, as also happens with the black pig's meat.

PRESERVES - Handmade preserves have a longstanding tradition on Menorca, as they are a good way of using up the spare fruit and vegetables in order to be able to eat them out of season. Preserves such as fig, pumpkin or quince are good examples of this. Savoury preserves, such as tomato preserve (*tomatigat*) or homemade tomato sauces (*sofrits*) are also common in Menorca.

COLD MEATS - The production of cold meats in Menorca is strongly related to the traditional “porquejades”, when the pig is slaughtered and its meat prepared to make a wide range of cold meats. Amongst the most popular products we find *sobrassada*, *botifarró*, *carn-i-xulla* and *camallot* or *cuixot*. *Carn-i-xulla* is unique to the island and it may be Menorca's oldest cold meat.

CHEESE - Cheese is one of Menorca's most popular and typical products. Its production is the outcome of an ancestral tradition and one of the pillars of Menorca's livestock-breeding and gastronomic

¹² <http://agroxerxa.menorca.es/Contingut.aspx?IdPub=9356>

¹³ <http://www.firaarrels.com/home>



traditions. It is made using raw cow's milk (pasteurised only in non-artisanal processes), only filtered using a cloth, then pressed, rubbed with brine, aired and matured.

FRUIT - Fruit has been grown on Menorca since the olden days, mainly in the ravines on the south of the island, sheltered from the winds. Examples of this include the large range of existing local varieties of fruit trees, very well adapted to the islands climate such as figs, apples, pears, plums, peaches and grapes, amongst others.

VEGETABLES - The cultivation of vegetables on Menorca is a legacy of Arabic tradition and has long been one of the pillars of Menorcan gastronomy. The island was self-sufficient in these kinds of products until just a few decades ago. Furthermore, being an island has favoured the existence of an exclusive genetic heritage in the shape of native varieties of which many still exist today. We should highlight the different types of tomatoes (d'amanida, de penjar, de ramellet, etc.), onions, peppers, garlic, lettuces, courgettes, aubergines and artichokes, amongst many others. A remarkable aspect of Menorca's horticulture is the cultivation of vegetables on "dry land" during the summer season meaning with no irrigation whatsoever, (called *estivada*) and that is still maintained by some farmers. Especially on lands in the northern part of Menorca, where native varieties of vegetables can be cropped without being watered at all, for example; Melons, watermelons and tomatoes.

PULSES/LEGUMES - although still at levels of low production, we can now find a number of pulses grown on the island on the market, such as: black-eyed peas, grass pea, blue sweet pea, chickling pea, chickling vetch, Indian pea, white pea¹ and white vetch, lentils, common beans and chick peas, all of them broadly used in Menorcan cuisine.

SHELLFISH - In Menorca, shellfish is caught using three different techniques: small-scale fishing, for the spiny lobster, slipper lobster or cuttlefish; trawling, mainly for prawns and Norway lobster; and fishing for shellfish, both catching them from the wild and using mussels and clams farming grounds inside Mahon harbour.

HONEY - Menorcan honey has a good reputation and its production is a Menorcan tradition as is demonstrated by the local apiculture industry, which until just a few decades ago still used traditional man-made beehives using canes. In 2006 the guarantee brand "Mel d'm" was created and it currently encompasses the islands entire commercialised honey production. Its regulations include the thousand flower honey clover honey, heather honey, blackberry honey and rosemary honey.

OLIVE OIL – At present there is still a low amount of olive oil being produced locally for resale, in part due to the expense of pressing the olives and because to date the local olive isn't used for oil. However, there are traces that prove the presence of olive oil production in Menorca centuries ago and there is an increasing interest to recover the old olive oil culture with a project being carried out to develop olive oil using a combination of olives, including those coming from Menorca's wild olive trees, of which there are many.

WINE - Menorca has been a wine-making region since Roman times and, hence, we find many historical references to the island's wine and its good quality. During Great Britain's rule of the island (18th century) there was a remarkable increase in wine production and vineyard crops! This went into a period of recession in the 19th century, partly caused by the end of the British occupation and the arrival of several pests affecting the island's vines, such as grape phylloxera. Nevertheless, in the 80s a number of initiatives to recover vineyard harvesting began and in 2005 a regulation on how the wine is produced was drafted under the label "Vi de la Terra Illa de Menorca", and it includes the following



grape varieties: Cabernet Sauvignon, Merlot, Moristel, Ull de llebre, Shiraz (as for red wines) and Chardonnay, Macabeu, Malvasia, Muscat, Parellada, Moll (as for white ones).

Other organisations and associations working towards the promotion and increased use of Menorca's local products are:

- Fra Roger is a non-profit organisation dedicated to the study, promotion and dissemination of Menorca's local gastronomy.
- Aportam is Artiem Hotels' own objective to promote their belief that traditional hotels can and should contribute to the sustainable development of the places where they are found. Artiem works alongside local farmers in order to purchase all local produce from them.
- Justicia Alimentaria Global, an organisation that derives from Vets Without Borders and which works on encouraging the consumption of local produce.

In view of these projects, it seems there is room for the development of the "KM0" concept (0 kilometres of transportation) in order to further improve the number of businesses buying local produce and promoting local farmers. In addition, a few possible projects could be:

- Support the annual farmers market in promoting local goods, awareness raising etc.
- Further research into the set-up and coordination of an organic food market – Discuss with *Asociación de agricultores ecologicos de Menorca* (Menorca's organic farmer's association).

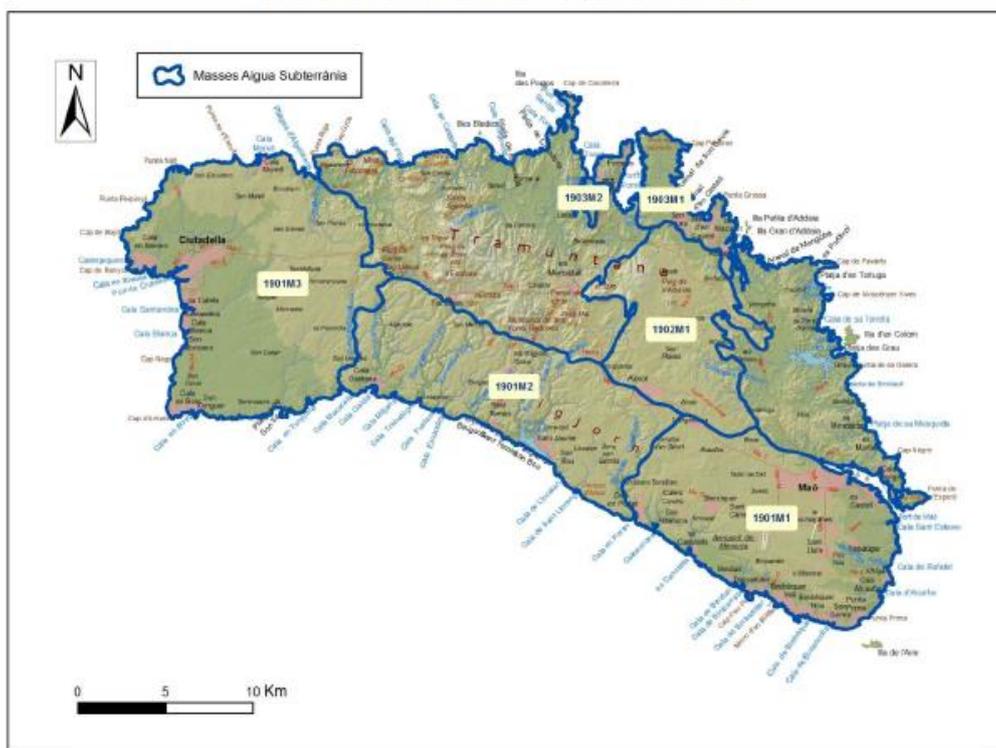
c. FRESH WATER

The sustainable management of its fresh water is Menorca's biggest problem and has been a matter of debate for the last 25 years. The progressive lowering of the piezometric water levels in the 80s along with the increased amounts of pollution due to salt and nitrate infiltrations in the 90s, became indicators that Menorca's water resources had significant deficiencies. However, to date, none of the debates and studies have resulted in proposed solutions being implemented and therefore the negative impact on our water resources continues to grow.

Since the Water Framework Directive (WFD) was established by the European Union in 2000, water is no longer seen as simply another resource but considered in a wider sense, as an essential part of the preservation of our ecosystems. This resulted in aquifers now being referred to as water bodies.¹⁴

The island's only source of fresh water comes from natural underground water bodies, which collect the rainwater that seeps through the land and is naturally channelled to these aquifers. According to the *Plan Hidrológico de las Islas Baleares* (2015), Balearic Island Hydrologic Plan, there are 6 water bodies in Menorca. 1902M1 Sa Roca, 1903M1 Addaia and 1903M2 Tirant, in the north and 1901M1 Mahon, 1901M2 Migjorn Gran and 1901M3 Ciudadela, in the south. However, this plan states that 2 of these bodies (Mahon and Ciudadela) have serious nitrate and salinity contamination issues, as well as over-usage. However, the over usage can be applied to the whole island.

¹⁴ Menorca's Centre de Geologia, Ferreries

MAPA 2B. MASSES D'AIGUA SUBTERRÀNIA. MENORCA.


However, according to the latest report that was presented at the Committee for Menorca's Water second meeting, all of Menorca's 6 water bodies are either in poor conditions or at risk of becoming so. Specifically, the aquifers at Mahon, Ciudadela, Addaia and Tirant are already either over-exploited or contaminated with nitrates. Whereas Es Migjorn and Sa Roca are at risk.¹⁵

Three of the aquifers levels in September 2017 were: Migjorn aquifer – 33% of its capacity, Ciudadela aquifer – 67% of its capacity and Sa Roca (Albaida) aquifer – 44% of its capacity.

In addition to this, it is estimated that Menorca's average consumption per person is above the state average with Menorca's consuming approx. 330 litres a day in comparison to the rest of Spain's average consumption of 250 litres per day. This is mostly due to the urbanisations and touristic areas of the island as in the villages the average consumption is of 200 litres per day. In addition to this, it is thought that 250,000,000 litres of water could be being lost a month just through evaporation from swimming pools.¹⁶ It is thought that the excess consumption in these areas is mostly due to non-endemic gardens and lawns as well as the need to re-fill the swimming pools.

Aside from the issue of consumption, Menorca is currently also faced with the problem of the quality of its water. It is estimated that water from 1 in 3 wells on the island exceeds the maximum levels of salinity permitted for human consumption, as well as having excess nitrates.

Also, there are many areas in Menorca that still don't have proper sewage systems and therefore these waters end up in the sea. In addition, the waste water that is sent to treatment centres and

¹⁵ <http://www.lavanguardia.com/local/balears/20171031/432503748276/los-seis-acuiferos-de-menorca-estan-en-mal-estado-o-en-riesgo.html>

¹⁶ http://cadenaser.com/emisora/2017/07/25/radio_menorca/1500982695_474401.html



cleaned, is then disposed of at sea instead of being recycled on the land etc. The infrastructures to change this system have been put in place at a number of the treatment plants. For example, in Ciutadella, the necessary infrastructure has been put in place in order for the treated waters to then be re-used for watering the farms however, the treated water contains too much salt and therefore can't be re-used.

Separately, also in Ciutadella, a desalination plant was constructed in 2010 in order to desalinate salt-water from the sea. However, putting the plant into commission has not yet been completed, due to the consequences this will have on the public's water bills. It is estimated that each household's bills will rise by approx. 40%.

A clear sign of the importance of this topic is the Consell Insular's recent decision to allocate 8.650,000€ exclusively to fresh water matters. The funds will be assigned to the local Town Halls in order for them to prioritise putting in proper waste water management systems where needed, as well as improving on inefficient water consumption practices. The aim is for the funds to be exclusively spent on improving our water resources.¹⁷

Separately, the Consell have also created an "Menorca's aquifer' community" which has the aim of getting all the key stakeholders and water consumers in Menorca together, in order to create a community from which they can all make common strategies and plans on how to improve the water situation in Menorca. As part of this community, the group will aim to finance scientific research into the water situation and possible solutions with the aim of becoming independent of, and more knowledgeable than, the Balearic government.¹⁸

Fresh water is a huge area for improvement and the Consell have already mentioned that we could be of support to the "COMUNIDAD DE USUARIOS DE LOS ACUÍFEROS DE MENORCA" (CUA – Menorca's aquifers community), which would be a good opportunity for us to be part of a solution to Menorca's biggest issue.

In addition, it will be interesting to see what plans each of the Town Halls comes up with for the additional funds they have been allocated for this particular matter and see if there are ways for us to support any of their initiatives.

d. WASTE MANAGEMENT

In 1994, after Menorca was declared a Biosphere Reserve, the Consorci de Residus Urbans I Energia (Urban waste and energy consortium) was established. This was an unprecedented event on the island, because regardless of the political party in power, the eight municipalities of Menorca, along with the local Consell would join forces to take on the management of waste and therefore solve an ongoing issue on the island.

Much progress has been made since then, as at that moment each town had its own landfill where they either buried and/or burned the waste. This resulted in not only wasted resources but also significant damage being caused to the environment. These days the island has an improved waste management model with advanced environmental principles which take into account both the islands particularities, and current European regulations.¹⁹

¹⁷ <http://cime.es/Contingut.aspx?IDIOMA=2&idpub=40916>

¹⁸ <http://biosferamenorca.org/Contingut.aspx?IDIOMA=1&IdPub=1280>

¹⁹ <http://www.riemenorca.org/Contingut.aspx?IdPub=8504&menu=Qui>



However, there is still a lot of work to be done as at present only 38% of urban waste is separated at home and this results in a loss of income for this sector.

The way the waste management model currently works is:

- All urban waste is collected from the large containers across the island and taken to Es Milá waste plant.
- Es Milá has different sections; one area where all the waste that has already been separated at source (paper, plastic and glass recycling) is processed and another area where all other waste is processed.
- The paper, plastic and glass recycling is all packaged up and loaded onto containers to be shipped to Mallorca or the mainland. For all of this waste recycled/separated from home and collected by the companies that manage each of the recyclable material, the Consortium are paid 30€ per tonne. Therefore, the result of not separating our waste at origin has a significant impact on the funds raised through this process which then effects our taxes.
- The remaining waste is then processed, classified and separated into its correct sections. This includes organic and all kinds of other waste.
- All of the recycling coming from the process of separating the waste at the plant itself is paid directly to the company that manage the plant, giving them an incentive to recycle and analyse how much is done by them and how much is done from home.
- At present there is no infrastructure in place to collect organic waste separated at source (private homes).
- No energy is generated via the waste management process.

Due to all of the above, it has become clear that the current facilities at Es Milá can't cope with the quantity of waste it has to process and this is having negative effects on the community, both financially and environmentally. Based on this, the Consell awarded a contract to a new organisation formed by Ferrovial Servicios y Adalmo and to be called UTE Es Milá at the end of 2015. The contract involves a commitment from the company to spend over twenty million euros on the current waste management plant in order to improve its facilities in order to increase its capacity as well as implementing a more environmentally friendly model. Despite this agreement being made at the end of December 2015, and UTE ES Milá already running the plant, the building works are still being negotiated and have not yet started therefore it is still not 100% clear what the final plant will look like.²⁰ Once the new plant is up and running, the consortium will be paid 40€ per tonne of recycled waste, meaning an increase of 10€ per tonne. IN addition, they aim to put in place the infrastructure for organic waste collection points in order to make compost and reduce the amount of waste going into the landfills.

There is a common myth in Menorca that we are wasting money as all our recyclable waste is taken off the island however, according to the consortium, it is not viable to aim for Menorca to have its own recycling plants as we do not produce enough to justify the costs.

Based on the experts I have spoken to, there are some important awareness campaigns and rural areas cleaning campaigns that could be carried out alongside the Consortium for waste and energy because it seems that one of the key challenges is getting the public to understand the benefit of recycling at source. Not only for the environment but also from a financial point of view for Menorca's waste management investments. The more we recycle, the more earn.

²⁰ <https://menorca.info/menorca/local/2015/499200/nueva-gestora-mila-reducira-por-ciento-residuos-llegan-vertedero.html>

e. RENEWABLE ENERGY

In 2015 Menorca generated its lowest amount of renewable energy in the last 7 years – just 3.2% of the total amount of energy consumed. Menorca’s ecological footprint is approximately seven times bigger than the actual size of the island and its carbon footprint nearly doubles the European Union one. This is mostly due to: Food being sourced elsewhere / High levels of waste and food miles / Poor recycling of materials as well as all recycling being taken off the island / Nearly 100% energy from fossil fuels / Low use of public transport / Little cycling & walking. Compared to a high car usage / Limited local supply of water.²¹

In view of this, the local government has contacted the central Government to propose using Menorca as a pilot project, as part of a case study in Spain, which would also include other Biosphere Reserves, on the use of renewable energy (i.e. not applying the tax on the sun, encouraging use of electric cars etc...) The aim is to make Menorca 100% sustainable on renewable energy because currently Menorca depends 99% on fossil fuels, which costs an estimated 250M€/year.²²

Endesa’s (electricity provider’s) power station on Mahon Harbour generates approx. 83% of Menorca’s electricity using fossil fuels that in turn generates 60% of all of Menorca’s carbon emissions. In recent years the push from both the Menorcan and Balearic Governments, to commence a transition to renewable energy sources has been prioritised. To support this, GOB has provided research on the current situation and a proposal to convert the current Endesa factory to gas as opposed to fossil fuels (note: technically, natural gas is also a fossil fuel, but less polluting in terms of CO2 emissions than coal or oil) was seen as a positive and quick option, at not too much expense.²³ However, on 13th of November, the Balearic representative for Territory, mobility and Energy, announced that the Government has rejected the proposal as a short-sighted solution.²⁴

In addition, by 2020, the Balearic Government is aiming for there to be as many fast-charging electric vehicle points as petrol pumps thanks to the proposal of installing between 500 and 700 charging points across the islands. At a press conference held at the beginning of November 2017, the Minister for Territory, Energy and Mobility announced that air pollution could be reduced by 90% in urban areas, if all cars were electric.

There is a lot of work to be done in this sector in order for us to reach a point where we are able to generate more of our own energy through renewable energy. A few options are;

- Aeolian Energy: Menorca is located at the height of the “Leon” gulf. Due to this, it is windier than the other Balearic Islands, which makes it an ideal location for Aeolian energy wind farms. At present, the island only has four light wind aero generators that were installed as part of a pilot project for increasing the use of renewable energy sources in Menorca. Therefore, it would be interesting to research the option of increasing the number of wind generators on the island. In particular, as this is considered the most cost efficient way of generating energy.

²¹ <http://www.cityzen-smartcity.eu/wp-content/uploads/2017/08/island-vision-men-parts-1-and-2-4.pdf>

²² <http://www.finanzas.com/noticias/empresas/20170504/pone-marcha-semana-movilizacion-3615527.html>

²³ <https://www.gobmenorca.com/manifest-de-la-mobilizacio-menorca-sense-fossils>

²⁴ <http://www.lavanguardia.com/vida/20171113/432865621958/el-gobierno-rechaza-la-propuesta-balear-de-cerrar-la-central-de-es-muntenar-y-mantiene-el-fuel-y-el-gasoil-en-la-de-mao.html>



- Solar panels. According to OBSAM, Menorca has the capacity/space to be able to be completely self-sufficient in terms of energy and there are numerous ways of improving the percentage of energy generated on the island, such as encouraging the use of solar panels in both the tourist and industrial sectors by using their roof space. In addition, there are currently only two solar panel farms on the island, which could be made bigger, or more farms developed. The farm in Ciutadella has already presented a project to more than double its size but is facing a push back from people who say it makes the landscape “ugly”. Also, the Spanish government’s energy reform meant a slowdown in the use of renewable energy forms. Therefore, it would be key to carry out a large amount of capacity building and raising awareness in order to increase and improve understanding of the benefits of these types of energy, as well as lobbying with the government.

3. INFORMATION SOURCES AND OTHER NGO’S:

There is a vast amount of information available on the environmental context in Menorca, including projects already in place and proposed projects needing further support.

Just a few of the sources where one can find information on environmental aspects effecting the island are:

Consell Insular de Menorca (www.cime.es): Here we find a section dedicated to the environment and Biosphere Reserve where the Consell includes news on different conservation activities taking place as well as posting adverts for support required in different projects. For example, there is currently a call for technical support in doing an inventory on biodegradable waste on the island.

- Consell de Medi ambient y reserve de la biosfera - Descripción del departamento: Comprende la actividad del Consell Insular referida a las materias de agricultura, ganadería, pesca, caza, recursos cinegéticos y denominaciones de origen. Comprenderá, asimismo, la actividad referida a medio ambiente, reserva de biosfera, agua, residuos y energía.

IDE Menorca (<http://cartografia.cime.es/>): A mapping website with all kinds of information on the island including public waste management sites, tourist urbanizations, waste water treatment plants, solar panel farms (only two at present).

Institut Menorquí d’estudis (www.ime.cat) (Menorcan research institute): An organisation that sits under the Consells umbrella, and whose mission is to investigate, recover, promote and disseminate Menorca’s culture and science.

OBSAM (www.obsam.cat) (Socio-environmental Observatory of Menorca): Is a project developed by the IME as a service provider for Menorca as a Biosphere Reserve. It is an instrument for data collection, research and information analysis of the local context with the aim of contributing to all those working towards Menorca’s sustainability and reaching the balance between human wellbeing and maximizing our natural resources.

GOB (www.gobmenorca.com) (Balearic Group of Ornithology and Defence of Nature): The main environmental NGO working on the island.

Adessium Foundation/Marilles foundation (<https://www.adessium.org/marilles-foundation/>) The Marilles Foundation is Adessium Foundations initiative aimed at improving the marine and coastal



environment in the Balearic Islands. The Ibiza Preservation Fund have already collaborated with this organisation and we hope to do the same in Menorca.

Agroxerxa – (<http://agroxerxa.menorca.es/>) - Networks of local producers and retailers of local products.

Alianza Mar Blava - The objective of the Alliance Mar Blava is to get a law declaring the Spanish Mediterranean as “Zone Free of Hydrocarbon Exploration”

UNEPMAP – (<http://web.unep.org/uneppmap/>) Coordinating Unit for the Mediterranean Action Plan Secretariat to the Barcelona Convention and its Protocols

Fundación Biodiversidad – (<http://fundacion-biodiversidad.es/en>) The Fundación Biodiversidad aims to help protect and conserve our natural heritage and biodiversity, taking a two-pronged approach: carrying out large conservation projects, and channelling aid and funding - much of which is European funding, to develop the projects of other organisations such as NGOs, research bodies etc. They are a key supporter of GOB Menorca.

ETS MENORCA - There is a platform for third Sector organizations in Menorca called ETS Menorca and it is composed by a number of the most relevant and active NGO's in the island. All conservation and sustainable projects are discussed in this forum. MPF should become a member in order to have some real participation and influence. Some of the NGO's in the forum of Menorca are: Caritas Menorca, 3rd Millennium Forum, ONCE, Veterinarians Without Borders, GOB, VSF Global Food Justice, Fra Roger, etc.²⁵

4. INTERVIEWS:

Miquel Camps – GOB

Toful – GOB

David Carreras – OBSAM

Eva Marsinyach – OBSAM

Javier Ares – Conseller de Medi Ambient, Consell de Menorca (Councillor for environmental matters)

Toni Roca – Environmentalist consultant, Company ABRIL

Lorena Mezquida - Consell de Menorca

Juan and Ricardo – Skipper and Director of Alnitak marine research centre boat

Rory Moore – Blue Marine Foundation

Irene Estaun – Biosphere Reserve Director, Consell Insular de Menorca

Aniol Esteban – Adessium and Marilles Foundation

Rita Pabst – Fishing inspector, Consell de Menorca

Agustí Rodríguez Florit – Geologist at Menorca's Geology centre in Ferreries

Cati Pascual – Environmental technician, Consorci de Residus i Energia (Waste and Energy consortium)

Maria Reurer – Agriculture technical engineer (Organic and permaculture)

Rafa Muñoz – Renewable energy advisor, Consell Insular and Mahon Town Hall.

David Doblado – Manager of GALP and LEADER associations for sustainable fishing

Miquel Truyol – Rural and Marine environments director, Consell Insular de Menorca

Carlos Coll – President of GOB

Sandra and Ana – Directors of Ibiza and Mallorca Preservation Funds

²⁵ <http://forumetsmenorca.org/>