

The Minorca Biosphere Reserve, seeking the way towards sustainability

by Juan Rita

Sustainability for the Island of Minorca

The island of Minorca (The Balearic Islands, Spain) was declared a Biosphere Reserve by UNESCO in 1993. This island can be considered as environmentally well conserved, although it has a very strong economical development based on tourism for the masses and thus places its natural heritage under enormous pressure. This declaration by Man And Biosphere (MAB) challenges us to seek a path towards a sustainable future, as it applies the concept of a biosphere reserve in a context that has nothing to do with a protected area, and is more in fact a space that is constant use by humans. It is an experiment whose object is to protect the biodiversity of the island, and above all, an intent to apply global environmental policies, many of which affect the human inhabitants in their day to day activities.

The application of the concept of a biosphere reserve requires concrete development policies compatible with nature conservation, and education programmes, investigation and participation in a network of like reserves. However, although it is fairly clear what needs be done, there is no clear guide in about how it should be done, especially

to resolve the terms such as “governance”, “management”, “citizen participation”, “monitoring”, etc., that should be in accordance with the Statutory Framework for the World Network of Biosphere Reserves and the 1995 Seville Strategy. This is entirely logical, as the enormous diversity of the situations for each reserve within the Global Network, makes it impossible to apply a single recipe to all reserves.

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The Minorca Biosphere Reserve has developed its own concept of reserve taking advantage of the opportunities that this island presents, for example: the decentralization of the Spanish government administration, the demonstrated capacity of inter-coordination between the island municipal governments, the well-

structured island society and the involvement of many cultural institutions of which make up the scientific community that studies the island (many of which pertain to Universities on the continent).

Evidently the island faces a multitude of threats, especially the expansion of tourism-based urban development with the corresponding infrastructural demands, and the depressed of the agricultural sector. The combination of these two tendencies could indubitably put an end to the islands environmental values, however a correct management of these same tendencies could offer an elevated quality of life within a well conserved natural environment. The group of initiatives that have been taken in Minorca constitute a special model adapted to the reality of concrete situations present on the island, although many of these could be applied to other areas with similar characteristics. This article presents a revision of the most important actions, especially those that have been applied within the last few years (1999-2003).

Minorca social and environmental setting

Minorca is one of the Balearic islands, which are located in the centre of the Western Mediterranean Basin. The island has a surface area of approximately 700 Km² (70,000 hectares, and is the most northerly located of the islands, and consequently has a somewhat colder and humid climate than Majorca, Ibiza

Fig. 1 The rural landscape is one of the main values of the environmental and cultural heritage of the Minorcan Biosphere Reserve.

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and Formentera, the other populated islands of the Balearics. Officially, approximately 80,000 people live on the island, but the real population can experience great seasonal swings, reaching a maximum of 180,000 in August and a minimum of 60,000 in December (OBSAM web site, 2003), and these cycles are directly related with the tourist industry and the Mediterranean climate.

Until the 80's the island had a relatively equilibrated economy, with an agricultural sector (milk and cheese production) and industrial (jewellery and shoemaking) that were both of great influential in the islands economy. From the middle 80's up to the present date, the growth in tourism and the service sector and the construction industry have grown unstoppably, and at this moment, tourism for the masses, based on sun and sandy beaches, forms the base of the insular economy (aprox.1,000,000 tourists in 2002). In spite of these changes, the agricultural and industrial sectors remain active, albeit submersed in a multitude of crises, mostly caused by entry into the European Union, competition from Asian nations, and above a much greater return for real estate investments (much of which is underground and covered-up from scrutiny by the Spanish tax system).

The natural surroundings can still be found in a well conserved state, above all in comparison with the neighbouring islands. The rural landscape, characterised by wide areas of pastureland for the island cows, is very harmonious and surprising to find in Mediterranean setting (Fig 1 and 2). The greater part of the island coastline has been spared from the destruction wrought by tourist developments and conserves important values in terms of biodiversity and landscape



Fig. 3 Wide coastal areas of Minorca can be found in an excellent state of conservation.

(Rita, 2002) (Fig. 3 and 4). The natural resources have also suffered pressure of development in the last few years, especially in terms of water resources. However, the current situation is still much better that surrounding islands where seawater must be desalinated for potable use, although in some coastal areas seawater incursion due to well over-pumping has salinised the aquifers.

The archaeological and ethnological heritage is so rich that it forms an inseparable part of the landscape, as there is a density of more than one site per square kilometre (Fig. 5).

The insular society has been organized into a multitude of associations (cultural, professional, social-politic, etc.), which eases the task of find representing spokespeople to establish a via of consultation with society and to participate in decision-making issues. The intellectual society, with members that either live on the island or the many natives that can be found dispersed through out the Spanish universities, can be found or organized through a entity called the *Institut Menorquí d'Estudis* (IME, or Minorcan Study Institution), which has played a crucial role in the declaration as well as the consolidation of Minorca as a Biosphere Reserve (Vidal et al., 1994).

The island is administratively divided into eight different municipalities, which to this moment have been able to coordinate actions such as municipal waste treatment. The Insular governing body, the *Consell Insular de Menorca* (CIME, The Minorca Insular Council) with competencies in the areas of land planning, roadways, tourism, and agriculture. This administration is also responsible for management of the reserve. There also exists a regional government and a Parliamentary government with ample legislative powers over the territory of the archipelago. The central government in Madrid conserves some important juris-

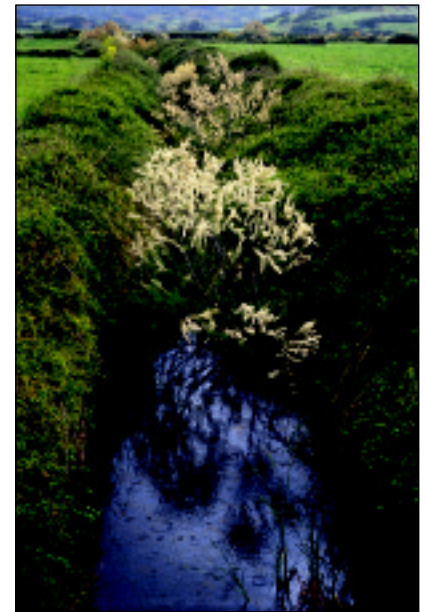


Fig. 2 The mosaic structure of the landscape favours biodiversity; the natural ecosystems and the cultivated lands are in closely inter-related.

dictions over the coastline, airports and the greater part of the judicial system. The decentralisation of the Spanish administration has had great relevance for the island governance; as important decisions like land-use planning, are made on the island, and in this manner systems for citizen participation have real decision-making opportunities. However, it is still indispensable the coordination between the different administrative levels, otherwise it would be very difficult o carryout an effective, complete, sustainability policy.

The Conceptual Framework of the Minorca Biosphere Reserve.

Biosphere reserves are juridical forms that do not yet exist within our legal ordinances (2004), and such must be "invented" for each circumstance. Only the Statuary Framework or the World Network of Biosphere Reserves and the Seville Strategy, both approved by UNESCO (1995) and the indicators designed for the follow-up define a minimum framework for action. In the case of an island like ours, we had to define some strategic lines of action and some of our own management tools that would respond to what could be considered as a biosphere reserve in an insular setting, that in a social-economic time characterised by enormous tourism and development pressures (Fig. 6).

These lines and tools are:

A. Reserve Zoning. The Biosphere includes all of the territory.

When Minorca presented its proposal to be declared a reserve, there was no doubt about if the reserve should encompass all its territory. In an island the size of Minorca, where the maximum distance between its two farthest points is somewhat less than 50 kilometres, any type of impact on the territory or whatever environmental policy is applied to any part of the island has an immediate repercussion upon the rest of the island. For an example, the increase in tourism related developments (and the same for an increase in the number of tourists), even though these would be concentrated in small areas along the coast, in the end translates into a greater impact of users upon the natural area (that would call for a management of the area), major traffic density on the roadways (and thus a greater cry for their amplification), an increase in waste production, energy and water consumption, etc..

It is erroneous to think that, and this is especially true for islands, that is possible to implant conservation objectives and policies in one part of the territory, for example in the protected areas, and forget or ignore what happens the rest. This type of approximation to reserve conservation has been very useful in protecting very valuable places, but in areas with the dimensions that we are considering, this is not effective in the mid to long term. The 1995 Sevillian Strategy gave some messages in this direction when it considered that greater importance should be given to the buffer and transition zones, where the greater economic development takes place.

Despite this holistic vision of the territory, the declaration of the island as a Biosphere Reserve requires a definition of the zones that they are divided into three distinct types within the reserve. As each area must respond to the environmental values and must specify a unique management policy for each zone, a criteria was adopted that the zoning contain with its boundaries the areas that are under protection at this moment. For example, the



Fig. 4. The virgin beaches represent an important resource for the creation of a new model of tourism based on sustainability.

Es Grau Coastal Lagoon Natural Park (*Parc Natural de S'Albufera des Grau*), which was the area with the greatest extent of protection with a management directed basically for a conservation of the biosphere, was chosen as a nucleus zone. The resulting buffer zone which corresponds to a series of areas that were protected in 1991 by an autonomic law (Declared Natural Areas of Special Interest, or *Areas Naturals de Especial Interés-ANEIs*) which as a whole include the principal forest lands, dune systems, coastal cliff-sides and salt marshes of the island. These deal with areas with vigorous use restrictions, urban development for example, with a high environmental value, yet without a specific management plan as such, that do not enclose the nucleus zone as represented in the classic schemes of reserve zoning. The last zone, the transition zone, corresponds to the rest of the island, which in a greater part are



Fig. 5 The archaeological records and the rural architecture, as can be seen in the photograph, are a part of the landscape and historical heritage of the island.

made up of agricultural areas of great landscape and ethnological interest, but also include urban zones and their infrastructures. At the time of writing these pages, there are no declared marine areas included within the reserve, although in 1999 the northern coast of north of the island was declared a great marine reserve and in 2003 the Natural Park was expanded to include these protected marine zones.

B. Reserve Management. A light structure for a complex territory.

Both the existence of an island government (Insular Council of Minorca, or *Consell Insular de Menorca*) that directs the greater part of the sectorial policies, and the horizontal character of sustainable development, it would have been unadvisable to create a parallel reserve management structure to that of the island government, as it would have duplicated the existing management structures. For the case of an island where the area of the reserve superimposes exactly the territory of the island government, it could prove more efficient the management structure of the reserve have coordinating, consulting and dynamic functions in addition to managing concrete policies.

In the case of Minorca the Biosphere Reserve Office was created with a Reserve Coordinator, which depends directly on the Insular Presidential Government. This office has had as functions the ability to launch projects (which have been developed by various insular government departments) including LIFE, Agenda 21, The Biosphere Reserve Law, etc., maintain contacts with UNESCO and the Network of Biosphere Reserves, disclosure and distribution and stimulating societies participation in the management of the reserve.

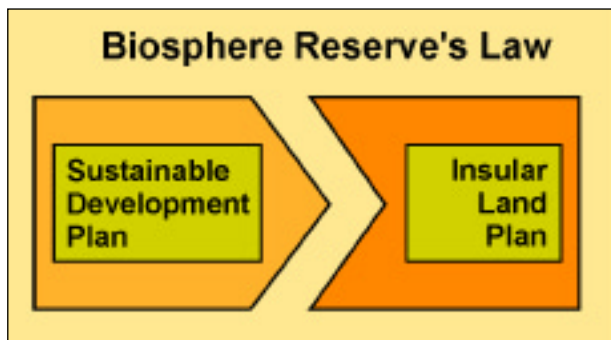


Fig. 6 The conceptual framework of the Minorca Biosphere Reserve (the Biosphere Reserve Law is in the draft stage).

The administrative and management part is complemented with a Biosphere Reserve Scientific Commission, a consulting organ made up of people from the scientific and academic world whose function is to assess and analyse the reserve projects as well as direct the Socio-Environmental Observatory of Minorca, an institution entrusted with the follow-up of the state of the reserve and of which will be made mention later (Fig. 7).

This is a light structure but it is effective if the territorial governmental organisms fully assume the philosophy of the biosphere reserve and promote it with concrete policies. In any case, if the responsible politicians do not consider as a priority the sustainable development of the island, it would be very unlikely that the reserve will function, whatever be the structure.

C. The environmental as a horizontal policy. Developmental Planning and management examples.

In the same manner that the territory cannot be divided, neither can be its environmental policies. The insular setting also makes it much more evident that environmental policy has a horizontal structure, a well-beloved idea within the discourse of sustainability. It is erroneous to consider that conservation policies are alien to the decisions taken in socio-economic departments, decisions about matters of transport (harbour and airport dimensions as a function of population ceiling vs. that of an external demand), agriculture (organic agriculture vs. intensive farming), tourism (Promotion of a traditional landscape vs. landscaped golf courses) municipal waste disposal (compost vs. incineration), hydraulic resources (rational water consumption vs. desalination plants) etc. all of these issues have a crucial repercussions on the island's

natural environment and are also fundamental in the daily lives of the reserve inhabitants.

In short, the philosophy of the Biosphere Reserve or that is, of its sustainability, should be introduced in all policies instead of having them be the exclusive of a certain department within the insular government. However, these horizontal policies need powerful co-ordinating mechanisms as well as a clear definition about what signifies sustainability for each one of the sectorial policies. It was for this reason that in 1997, that with LIFE funds a Plan for the Sustainable Development of Minorca was drawn up, where a diagnosis was made for each one of the socio-environmental sectors and presented proposals for each one of them. And has served as an action guideline for the design of concrete actions since then (Insular Council of Minorca, 1998).

Some of these concrete actions where the importance of coordination between administrative agencies are the following:

Municipal Solid Waste. The policy for municipal solid wastes for the island was designed in the late 1980's with some extremely important decisions.

- Formation of Solid Waste Consortium, in which all of the island municipalities and the Insular Council of Minorca participate.
- The unification into a single site or municipal solid waste treatment for the entire island.
- Transformation of those wastes into compost and concentrate into one area for waste deposition
- A definite dedication to separate wastes at the source point.

The excellent co-ordination between administrations and their decision for the most environmentally friendly system, has resolved one of the principal environmental problems of the island in a satisfactory manner and has placed the island at the vanguard of our country in selective recovery.

Management of the littoral. In a tourist island like Minorca the management of the littoral has an extraordinary economic importance, as the greater majority of the tourists that visit the island come precisely for the sun and the sandy beaches (Fig. 8). In the summer, thousands of visitors frequent the coast on a daily basis to enjoy the nearly one hundred beaches on the island. The Spanish legislation entrusts

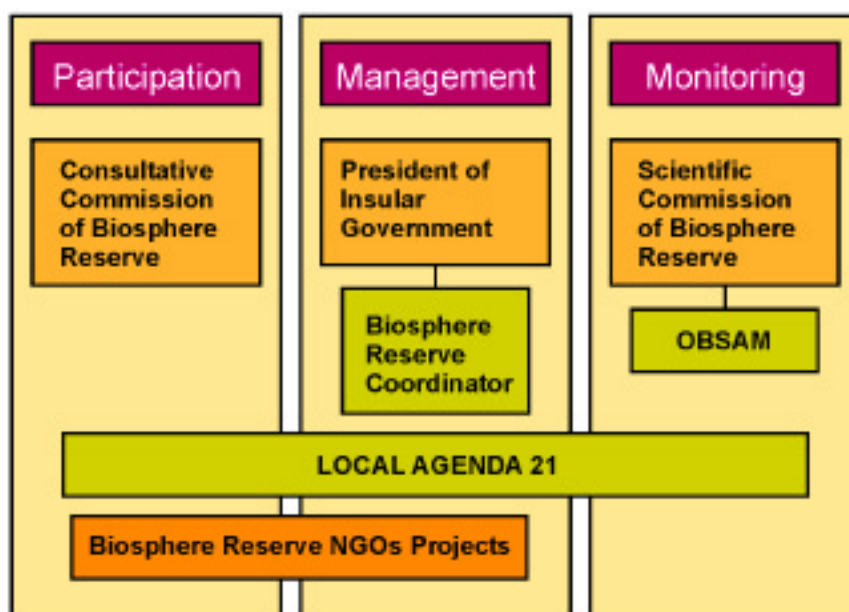


Fig. 7 Organisational diagram of the Minorcan Biosphere Reserve. The Insular Council of Minorca (Consell Insular Menorca) handles the reserve. The Local agendas 21 are developed by the island municipalities. The NGO projects are financed by the island governments and carried out by the local associations.



Fig. 8 The management of the littoral is carried out with a holistic focus to make its conservation compatible with the public use that it sees during the summer.

the beach maintenance to the corresponding municipality, and until the 90's, each city government on the island did so in an independent manner, normally without regards to environmental concerns. During this period heavy machinery such as tractors and excavators have entered into fragile areas such as beaches and dune systems causing a very serious environmental impact. As a consequence, many of our beaches have eroded and have been reduced in surface area. From the year 1999, all governments decided to unify their maintenance habits, introduce environmentally protective methods, and allow that the Insular Government direct the process. At the present time, these beach cleaning methods have converted into an environmental service instead of a matter of environmental degradation. The new criteria are:

- Classification of the beaches as a function of their use (urban, non-urban, but with easy access, and non-urban but with access by foot traffic), and designing each cleaning program according to the beach category.
- The cleaning program includes all island beaches, not just the touristic ones, and throughout the year (not just during the summertime).
- Manual cleaning methods, except in the urban beaches.
- Use of cleaning machines specifically designed for cleaning sandy surfaces.
- Quantification of the residues extracted during the cleaning process for evaluation of system effectiveness.

atic beaches (of 10 projects 5 have been implemented, with two of these cases in collaboration with the Environmental Ministry).

Local Agendas 21. The participation of the municipal administration in the management of the Biosphere Reserve is fundamental, as these municipalities are disposed with a great autonomy and capacity for the management of their territory. Also, citizen participation is easily stimulated when you address questions that affect their daily lives.

With funds proceeding from three distinct administrations, (The Balearic Government,

- Communication campaigns for beach-goers (over 150,000 pamphlets edited each year in six languages, posters, web page, etc.) to promote the environmental values of these areas.
- Evaluation of the beach carrying capacity and access and parking design in function of their capacity for the more problem-

The Council of Minorca and municipal governments) in 2002 the elaboration of Local Agenda 21's began simultaneously in the eight island municipalities, in the manner that covers the entire island territory. These Local Agendas are allowed to endorse a concrete programme for sustainability approved through a citizen participation process that should be complete by the year 2004.

Biodiversity. Although the Insular Council of Minorca does not dispose competencies over the biodiversity, they did apply for a LIFE program from the European Union (2000-2004) for the protection of threatened plant species. Some of the actions of this project are:

- The elaboration of plans to recuperate these species.
- Eradication of a species evasive to the littoral (*Carpobrotus* spp.).
- Regulation of the littoral access.
- Education campaigns.

This project has generated synergetic interests with the littoral management process, as is now complemented from the point of view of biodiversity. However, these actions should be coordinated with the Ministry of the Environment which is saddled with the eradication chores along the coastline and of which it is composed of the pertinent competencies and in conjunction with the Balearic Government should authorise and supervise the works related with the protected species.

The Coastal Marshland Natural Park.

The Coastal Marshland Natural Park nucleus zone of the Biosphere Reserve. This park has since its creation, a management body (Management Authority) formed by three different administrations (the local, insular and autonomic governments), although the management responsibilities fall especially upon the autonomic government. However, budget approvals and annual management plans should be made by common accord between three administrations. The smooth operation of the Park within the last few years has made possible the amplification



Fig. 9 More than 7 % of the species on the island of Minorca are endemic. In the photograph is *Femeniasia balearica*, a genus and species exclusive to the island.

of its boundaries, in 2003 in both marine and land area.

D. Territorial Planning as a management tool.

In an island with a strong tourist and housing growth sector, territorial planning is an important tool for the future direction of the island, and imposes regulations about how the territory should be used, and permits the situation of infrastructures upon the terrain from a holistic point of view of the islands reality. From the conservation point of view, a territorial plan would give an idea of what would be the environmental scenario over the medium range, and would for example, have an idea of what should be the population ceilings as well as evaluate the guaranties of conservation of the natural and cultural heritage.

In our case, two types of documents have been drafted:

- A Land Plan at the insular level (*Plan Territorial Insular*, PTI).
- Six management plans for the protected areas that make up the Biosphere Reserve buffer zone.

In 2003 the Insular Territorial Plan was approved, this urban planning document is extremely important for the island economy and obviously for its natural environment, as it outlays the islands future for the next years and supposes a guarantee for the conservation of the values that were given when Minorca was declared a Biosphere Reserve. This plan is the tool that would regulate not only what should be a limit to the islands population, but as where this population should be felt, what infrastructures must accompany them, and which parts of the territory that must be protected. This plan offers an opportunity to control the urban growth, which if in step with past rates, would have doubled. The main contributions of this plan are (Insular Council of Minorca, 2003):

- Increase the protected area of the island to 60% of the surface area.
- Prohibit building on rural lands (to avoid that rural areas are transformed into urban areas), save for beltways surrounding the cities.
- Reduce the quantity of developable land in tourist zones by an equivalent of 55,000 tourist places.

- Prohibit the construction of apartment buildings in tourist areas, the only new tourist lodgings permissible must be the form of hotels and single family dwellings.
- Establish urban growth quotas between municipalities.

On their behalf, the six approved plans for the protected areas define the possible uses for the different zones and the carrying capacities of the natural areas, providing as well an agenda of actions with the object of conserving the rural values.

E. Participation. Society as a whole is responsible for the reserve.

The statutory framework of the Biosphere Reserve of 1995 requires that certain specific channels for citizen participation in decision making tasks for the biosphere be habilitated.

The Minorca Biosphere Reserve benefits from a series of circumstances that facilitates citizen participation. One factor is the decentralization of the Spanish governmental administration, which in turn has created an insular government capable of a wide range of competencies that allows a proximity between the citizens and the administration that makes the decisions. Another factor is that the society is very well structured, with many civic associations of multiple forms that can easy provide a spokesperson to represents a multitude of social players.

In the Biosphere Reserve, empowers several diverse mechanisms for citizen participation (Rita et. al., 2002) that can be classified as:

- Formal systems of participation.
- "ad hoc" consulting.
- Actions in management projects.

The formal participation in the Biosphere Reserve is channel through a consulting commission (*Commissió Consultiva sobre el Territori i la Reserva de Biosfera*) a body in the various representatives of the various island social players can participate: political parties, trade unions, associations, business associations, neighbourhood associations, ecological groups, etc., and reunites

approximately every three months. This commission informs and consults with society the principal decisions that should be taken on the island, and can have an importance incidence over the territory. This commission had a relevant role, for example, in the discussion of the draft for the Insular Territorial Plan.

A second level of formal participation are the citizens forums that are made up from the eight island municipalities that should participate in the debate of Agenda 21. These agenda are being (2004) elaborated simultaneously in all of the island municipalities and will define the developmental paths of each. The municipal level permits that greatest approximation between the citizen and the matters that they will participate and decide upon. From the administrative bodies of the Biosphere Reserve, stimulates the elaboration of these eight local agendas is precisely to generate ways of participation and create agendas containing consensual actions that are directed at the sustainability of these municipalities. These participatory practices where created by special consulting firms.

Additionally there are many bodies of formal consultation for sectorial themes (for example; the Economic and Social, or the Natural Park Governing Assembly) on an insular and municipal scale which guarantees citizen participation in the decision making process.

The "ad hoc" participation of is another extremely important via of participation and consultation. These are meetings or monothematic seminars in which the affected social groups are summoned. Through these informal reunions, we can learn and discuss the opinions of the main citizens collectives about concrete issues. In the last few years, there have been conducted a great number of these types of reunions, treating a very broad range of themes (The Insular Territorial Plan, Regulation of wind-generator parks, main projects that can be financed with an "EcoTax", planning for the port of Ciutadella, etc.) or simply analyse the future of the Biosphere reserve (Socio-Environmental Observatory of Minorca, *Observatorio Socio-Ambiental de Menorca* -OBSAM, 2000).

The participation in the management of

the Reserve on behalf of the citizens has been stimulated through project calls for ideas to be developed by the various non-governmental agencies (NGO's). It is an attempt to take advantage of the many good ideas that the assorted island NGO's have in mind to carry-out. For this purpose there has been created financial incentives to guarantee that no good idea will be left out without further development. In the last four years, approximately 60,000 € has been awarded annually for the execution of these projects. In this manner the following exemplary projects have been created, for example:

- Restoration of the ethnologic heritage.
- Create botanical walks.
- Restore old rip-wrap trails.
- Clean-up marine beds.
- Design sustainable school buildings where this subject can also be taught.
- Conduct education campaigns.

F. Independent Monitoring programs: The Socio-Environmental Observatory of Minorca.

Monitoring of the state of the Biosphere Reserve and the advances towards sustainability is also a requisite which is reflected in the Statutory Framework (Article 7.d) and the Seville strategy, and thus exist a group of indicators that evaluate the compliance of the objectives proposed in the Strategy.

In our case, for the monitoring of the Reserve, a Socio-Environmental Observatory of Minorca was created (*Observatorio Socio-Ambiental de Menorca*, OBSAM) within the cultural organization Minorcan Study Institute (*Institut Menorquí d'Estudis*, IME) and which is under the supervision of the Scientific Committee for the Biosphere Reserve (*Comissió Científica de la Reserva de Biosfera*). This is a committee of scientific nature, which assesses and advises the Reserve management.

Although the OBSAM does receive funds from the insular government, is of an independent character in the sense that it has the liberty to study and express its opinion about Reserve matters.

The OBSAM has worked these last years in statistical data recollection, some of which have been already obtained by the observatory itself of a ample battery of social, economic

and environmental indicators, classified by their the classical scheme of pressure, state and reaction. However the principal function of the Observatory is the design of synthetic indicators of sustainability, that integrate the information in some few statistically significant values. The OBSAM has utilized participatory techniques for the selection of these sustainable indicators in the form that the citizens opinions were collected to determine which indicators where understood by society. These results can be consulted on the internet and the web page: <http://www.obsam.org/>

G. The Biosphere Reserve Law

The strategic line of the last point is that there should be in tune with the objectives between the various afore-mentioned administrations within the concept of the Biosphere Reserve. However, throughout the history of the reserve, there have been many changes of the political composition of the various administrations so it is to expect that at any given moment, this syntony may not exist, in fact, I the case of Minorca this political syntony has never been produced between all of the complex levels of the island's public administration. For this reason it is essential to have a framework document supported by a wide consensus between the political forces, above all about what the biosphere reserve should be. This document should be of obligatory compliance which lay out the rules of the game between all of the islands social players and with sufficient strength to stabilize them for the long term run. In our case, we consider that a Biosphere Reserve Law could fulfil this "constitutional" role that would define the Biosphere objectives, the manner of participation of the administration in the management of the reserve. This law would also cover the judicial void that that exists for biosphere reserves in our country.

In the case of Minorca and at the moment of writing these lines (the beginning of 2004), there is a draft of a law with these characteristics.

Conclusions

Protected areas have served as a fundamental instrument for the protection of the biodiversity. But in the last World Park Congress held

in Durban (2003) it was made clear that the spectacular increase in protected areas has not been sufficient to brake the deterioration of the biodiversity. Also in this congress, and in meetings held in the previous years they have made manifest the necessity to integrate the local communities and establish a network that would allow these areas allow connection amongst them.

The biosphere reserves approach the problem of conservation through from a much wider and holistic than those that includes the protected areas as yet another instrument for their conservation and that they give a great importance to non-protected spaces. These peripheral zones may posses an enormous ecological value, as a matrix that would interconnect the territories as well as providing a great landscape and cultural heritage. These biosphere reserves open the possibility to change the scale in which the natural habitat is protected by applying different management strategies to each one of their areas. For this reason it is very difficult to classify them with the categories of the UICN, at least for those that could be considered as "Meta-protected areas". This approximation implies a major complexity in management, which in addition to the well known techniques for biodiversity conservation, must be added territorial planning, environmental policies and rural development (Mata, 2002).

The case is that we consider in this article is a good example of this situation, we have taken heed to find or implant solutions for a minimum of requisites that a reserve should have, and yet this model does not have to be the only possible solution. Some of the main characteristics of Minorca Biosphere Reserve are:

- A natural park is another piece of the territory, it occupies a place a specific management needs to be made to conserve the biodiversity; but it is only one of the pieces that is integrated into a much broader territory were all of its parts have value and his value is due to the whole of these parts, not due to their individual richness.
- The inlands' political environment affects all insular administrative departments, that are supported by the criteria of the

Plan for Sustainable Development and the regulations that govern the territory as are stipulated in the Insular Territorial Plan. In addition, local policies must be based on the elaboration of Local Agendas 21.

- The management structure is flexible and has an office of coordination and action, with an scientific assessment committee.
- In the mechanisms for participation there are formal ones as well as “ad hoc” in a form that lets us consult the citizens their opinion over the decisions to be made about the territory. Financial tools have also been implemented so these same social organizations may participate in the management of the reserve.

- A monitoring organism has been created that possesses sufficient autonomy to develop the indicators needed to evaluate the state of the reserve.
- Legal support for the figure of the Biosphere reserve has been should be created to obtain a stable framework for the reserve in a context of the political changes that occur with the passing of time.

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