

# THE SUSTAINABLE DEVELOPMENT STRATEGY OF THE URDAIBAI BIOSPHERE RESERVE

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The Urdaibai Biosphere Reserve is situated in the central, coastal area of the province of Bizkaia (Basque Country Region). The territory, which covers the water drainage basin of the River Oka, encompasses an area of 22,000 hectares and includes, fully or partially, 22 municipal districts. The main population settlements are the Towns of Gernika-Lumo and Bermeo, and the total population resident in the Biosphere reserve amounts to some 45,000 people, plus several thousand more during the summer. Despite the major industrial development of the district throughout the 20<sup>th</sup> century, the area has maintained its rural character and has maintained the largest coastal wetlands of the Basque Country, the Mundaka Estuary, in an acceptable state of conservation.

This is a relatively well conserved territory, where scenic and ecological diversity is high, despite the fact that it has been totally transformed by man. In general terms, it can be divided into the salt marshes, the Cantabria holm oak woods, the shoreline and the countryside. In the area of the Reserve, there is also a great diversity of historic and cultural elements that constitute a rich and diverse cultural and ethnographic heritage.

In order to tackle the challenges faced by the district with a different philosophy and approach, that is, to define a new regional development model, the Basque Country Regional Government proposed the area as a UNESCO Biosphere Reserve. After being accepted as part of the World Network of Biosphere Reserves (December 1984), The Basque Country Parliament adopted the Urdaibai Biosphere Reserve Protection and Planning Act, Law 5/1989, of the 6<sup>th</sup> of July, with a view to protecting and enhancing the recovery of the ecosystems involved, as a whole, because of its natural and scientific interest and its potential for environmental education. The aim is to establish a regional development model that will make it possible to conserve the natural and cultural values of the reserve without mortgaging its economic and social development. Two fundamental tools have been established for this: the Use and Management Master Plan (Decree 242/1993) and its later modifications (Decrees 27/2003 and 181/2003), in an attempt to meet the conservation and regional planning objectives for this area, and the Socio-economic Activities Development and Harmonisation Programme – PADAS from its initials in Spanish (Decree 258/1998), as a framework for establishing an integral planning approach based on the principals of sustainable development.

The objectives of the model proposed may translate into the following prospective images:

- A rural space that has been developed as a multi-functional space, with special emphasis on the sustainable management of natural resources and everything that has an impact on the quality of life in the countryside.

- A competitive, environmentally friendly industrial sector working towards sustainable means of production that will preferably recover the environmentally degraded areas.
- A tourist industry working towards improvements in management, structuring and overseas promotion.
- A well connected territory that optimises and enhances existing infrastructures.
- An area in which the very most is made of resources and efforts, with a maximum degree of co-ordination with the public administrations and private partners.

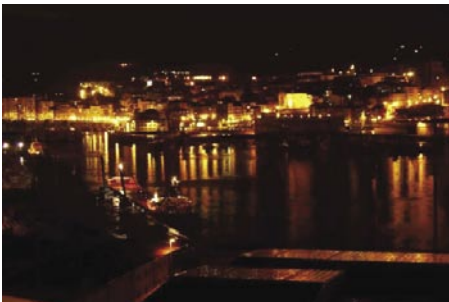
As a strategy document in sustainable development matters in the Reserve, the PADAS sets five strategic objectives, divided into ten strategies and 22 lines of work that are implemented in over 100 development proposals encompassing different aspects like water supply, waste water management, energy, solid domestic waste, quality of life in the countryside, transport sustainability, forestry management, land planning, natural and heritage resource planning and others.

One of the lines of work of the PADAS is “Adaptation and development of energy supply, diversifying supply and aiming for its environmental integration”, which is implemented through the following action proposals:

- Harmonisation of facilities with environmental protection.
- Development of an electricity distribution grid based on the inclusion of environmental criteria.
- Urdaibai Environmental Energy Industry Plan.

In this sense, one of the achievements obtained with the application and development of the PADAS has been the drafting of an Urdaibai Biosphere Reserve Energy-Environmental Master Plan that includes a section on improving public lighting and its efficiency in the Urdaibai municipal districts.

Along these lines, in 2003, a first diagnosis was made of the status and situation of the public lighting installations in the municipal districts falling in the Reserve. The study concluded that 11 of the 20 districts studied presented low or inexistent levels of light pollution, eight presented average levels of contamination and only one municipal district presented high levels of light pollution. The results led to the development of



Town of Bermeo, in the Urdaibai Biosphere Reserve.



Mouth of the Urdaibai Estuary from Cape Matxitxako.

a set of proposals aimed, on the one hand, at improving energy efficiency and, on the other, at reducing light pollution. Since this first study, and always based on sustainability criteria, we have worked towards implementing measures in the lighting system that will enable us to attain the objectives set.

In 2005, a technical and economic assessment was made of the possibility of implementing public lighting measures aimed at attaining energy improvements in the areas of supply and design, setting as a general criterion that *“All road lighting must be installed or adapted to reduce the environmental impact ..... with regard to energy consumption and pollution or night glare,...”*.

Within the framework of this study, with regard to light pollution, the proposals are basically aimed at using street lamps with bulbs that will prevent or limit the light being emitted upwards, as well as the correct assembly of the lamps in a suitable installation position, as lamps were detected that, while having a suitable design, were not installed with the right inclination. Proposals were also made with the aim of adjusting power levels to the minimum possible to get the desired lighting results by controlling power surges and by defining lighting parameters and levels. Finally, and also aimed at minimising the impact of light in the domestic field, the recommendation to use devices for appropriate use of lighting were taken on board, with a view to achieving appropriate management of energy consumption based on time of day and needs.

Bearing in mind that the competence for addressing these proposal lies with the Town Councils of the Reserve, a proposal was put to these Councils in the sense of establishing municipal exterior lighting by-laws to Protect the Environment by improving Energy Efficiency and by reducing Light Pollution, to be included voluntarily in municipal regulations.

We are currently in a period of profound and collective reflection, designing the Urdaibai Biosphere Reserve Sustainable Development Strategy, so that this strategy can act as a guideline for the future and to become a benchmark for action in the context of a view and a project that is shared by the district as a whole. The participation of the population is essential to the success of this process and this has to be attained by involving the social, economic and political stakeholders and by mobilising local leaders and local society as a whole.

As part of the aforementioned Strategy, an integral and strategic diagnosis is being conducted on different aspects, including the atmosphere, referring to the tools available for evaluating and controlling air, noise and light pollution, with a view to establishing scenarios and critical issues and, hence, jointly defining the view and the objectives of the Reserve in the form of commitments, programmes and lines of action.

## **Contact**

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