



© ELOI BONJOCH

SUSTAINABLE DEVELOPMENT IN CATALONIA

CATALONIA IS IMMERSSED IN AN ECONOMIC SYSTEM CHARACTERISTIC OF WESTERN SOCIETIES AND BY DEFINITION UNSUSTAINABLE. BUT OVER AND ABOVE THE SYSTEM'S DEPENDENCE, A REMARKABLE EFFORT IS BEING MADE TO MOVE TOWARDS A SUSTAINABLE SOCIETY.

JORDI PORTABELLA BIOLOGIST AND MASTER IN ENVIRONMENTAL ENGINEERING

In Catalonia, like the rest of the countries making up the European Union, there is no globally binding document taking the country towards a sustainable form of development. But we can make a rough diagnosis of the state of affairs in the light of the current situation and of current trends. Catalonia, as a Mediterranean country, needs to take special care of its water resources. In our country, rainfall is very irregular and we therefore have to be on guard against possible water shortages affecting the country's day-to-day activities and also foresee ways of controlling floods resulting from torrential storms. This means that the rivers of Catalonia are closely regulated by means of

twenty-three dams, which have brought stability and security in the water supply, and considerable use is made of them for obtaining hydroelectric energy, a renewable energy source, which accounts for about 5% of the total energy production in Catalonia. Parallel to these infrastructures for the regulation and use of rivers, a problem has arisen from the lack of legislation stipulating the minimum volume needed for rivers to fulfill their natural function. Subsequently, as a result of damming, but also of the use of river water for irrigation, many Catalan rivers run dry at certain times of year. This has done a great deal of damage both to the riverside woods and to the flora and fauna of our rivers. This situation, along-

side the high rate at which aggregates are extracted from the river beds, has meant a significant decrease in the amount of fluvial material reaching the coast. This decrease in natural river depositions on the coast and the large number of maritime ports (44) has affected coastal dynamics. In recent years many beaches have been artificially regenerated. This practice is a model of unsustainability since, aside from the cost of these operations, it directly or indirectly affects the beds of *Posidonia* (*Posidonia sp*) along the Catalan coast, subsequently altering coastal dynamics and affecting the habitat of the young of various species of fish of commercial interest. Even so, the fisheries policies our country applies are



© ELOI BONJOCH

well orientated and highly encouraging since in the last few years close seasons have been introduced for the capture of certain types of fish, allowing the recovery of species which were in danger of extinction.

As regards waste, Catalonia has made a very positive turn since the Waste Regulation Law was approved. This law affects municipal as well as industrial waste and, through a series of management plans, programmes are being developed that are directed at the minimization, revaluation and treatment of waste. Today, Catalonia produces 2,792,542 tons of municipal waste and 2,605,000 tons of industrial waste every year, approximately the same average weight per person produced in the countries of Europe. Traditionally, though, there has been little recycling in our country. Until now, 78.8% of waste was dumped (some of it in illegal dumps that are now being closed down at a good pace), 18.2% was incinerated and 3% was recycled. With the recent application of the various plans mentioned above, it is foreseen that in four years every town in Catalonia of over 5,000 inhabitants will have its own waste management centres, with selecti-

ve waste collection, and that smaller towns and villages will co-ordinate amongst themselves to do the same. This means that five years from now 39% of municipal waste will be recycled, 32.5% will be incinerated and 28.5% will be dumped. In the field of industrial waste, certain products are being recovered, such as CFCs, solvents, oil-drums, car oils, tyres, batteries and fluorescent lamps, and a Subproduct Exchange has been set up for companies, which reuses a relatively small volume of waste products but one higher than the average for these exchanges in the European Union. Unfortunately, little has been done so far to change industrial production processes, which is the chief measure of sustainability, and incineration has increased, though it is used to produce energy. As regards water pollution, a lot of work has been put into the construction of treatment plants and the Clean-up Plan is two years ahead of schedule. The quality of the water in our rivers has improved substantially, but the quality of the aquifers, in spite of improvements, varies widely. On the coast we find some aquifers that suffer from salinization and in the industrial areas some are contaminated.

In the energy field, Catalonia, like the rest of the world's countries, has an unsustainable energy model which shows no sign of change. 94% of primary energy consumption comes from non-renewable energies. Fossil fuels represent 66% and nuclear energy 28% of production. Renewable energies are based on the use of hydroelectric power (5%), and sources such as solar energy, wind energy or biomass account for less than 1%. What is most regrettable, though, is the absence of programmes for energy economy, conservation or efficiency, and the fact that new buildings are not incorporating bioclimatic criteria.

At the same time, in relation to the physical territory and infrastructures, the recent approval of the Territorial Plan for Catalonia fails to look seriously for a model of sustainable development or of territorial re-equilibrium. The management of natural areas is being handled better, although there is still too much pressure on categories of protection by different socio-economic sectors. Apart from the typical protection measures, Catalonia has a Plan for Areas of Natural Interest, which classifies and protects 22% of the total Catalan territory.

Even today Catalonia has an enviable biodiversity and 42.5% of its territory is woodland. Our country's natural wealth was once threatened by unsustainable forest exploitation in areas with tree species of commercial interest. At the beginning of 1990, though, this trend began to change and forest exploitation today can in some places be said to be sustainable. The main problem for the woods of Catalonia are the forest fires that ravage them year after year. The problem of fire in the Mediterranean Basin is very complex and difficult to solve without the introduction of profound structural changes in the countries affected.

In short, Catalonia is immersed in a socio-economic situation characteristic of Western societies and by definition unsustainable. But over and above the system's dependence, a remarkable effort is being made to try to move towards a sustainable society to stimulate human welfare. The efforts being made to reduce contamination, improve the management of natural areas and of waste, water quality and fishing are considerable. This trend must now be extended to all sectors and, above all, the criteria on which sustained growth rests must be changed for criteria of sustainable development. ■