Contribution from
Mellionnec

INTERVENTION

The rural landscape of central Brittany is characterised amongst other things by its dense hydrographic network and its copses and woodlands. During the last four decades profound changes have taken place, mainly because of increased intensification in farming practice and the growth of the agricultural feedstuffs processing sector. An attempt to modernise and rationalise land distribution, giving up some traditional agricultural practices and some land areas, with the massive use of artificial fertilizers and pesticides, have brought in their wake serious damage to the natural environment and to the quality of water courses

Central Brittany is the catchment area of Brittany. Because the big coastal rivers have their sources here, central Brittany has not suffered severe environmental damage. Nevertheless problems exist and action has had to be taken to face them.

MELLIONNEC'S POTABLE WATER

- The water Authority

Mellionnec belongs to the Saint-Maudez water authority which supplies its potable water. Created in 1958 this authority had, during the 1960s and 70s, total control of potable water in its territory. It is made up of ten central Breton communes, three of which are participating in the European village scheme - Mellionnec, Plelauff and Lescouet-Gouarec with a total of 4800 inhabitants

In France communes and water companies can manage water distribution themselves or lease the management out. Saint Maudez has adopted the lease system. To provide the water required, estimated at 300,000 cubic metres a year (about 105 cubic metres per consumer a year), the authority has six underground reservoirs built between 1963 and 1978. It also demands a water reserve of close to 25% of its consumption

- Safety Zones

For several years Brittany has experienced water pollution principally from pesticides and nitrates. These pollutants come mainly from the extensive use of artificial fertilizers and from the slurry from intensive factory farming. To face this problem various public programmes have been instigated. One available method is the creation of safety zones. Establishing them for ground water is not always easy, but they are much better adapted for underground reservoirs.

Water laws of 16/12/64 and 03/01/92 have made the establishment of such water safety zones compulsory. Their aims and organisation have been set out in a 1990 circular. Protection is effected by establishing two zones, one for close protection, the other a little further away and, in time, a

more distant zone which would complete the system

The first zone aims to prevent direct pollution, the other two more widespread pollution. In these zones bans and orders apply. The immediate protection zone is closed and access forbidden. Maintenance in this area must be non-polluting; the use of any chemical weedkiller is therefore forbidden. In the second zone, rules are fixed according to a Departmental classification

- The Case of Villeneuve

In conformity with the law, the water authority must create safety zones around its catchments. Each of these has its specific problems (pollution level, human activities, geological context, etc.); preliminary studies must be systematically undertaken

We are concerned here with the case of Villeneuve. This catchment reservoir mainly supplies Mellionnec commune

The mean amount of nitrates is of the order of 35mg/litre. This is above the recommended European norm of 25mg/litre (the threshold alert level). It is, however, below the 50mg/litre which is the maximum for potable water. A level greater than 50mg/litre means either that collection of water must be stopped or that a nitrate filter must be installed. The latter solution is expensive and unrealistic in the context of rural communes with low budgets. Accordingly it has been necessary to solve the problem by putting in place safety measures to protect the catchment and ensure its continued use

The area studied for this protection zone is about 45 hectares (ha). Over 60% of the area is agricultural land (including fallow), the rest is woodland and heath. There is a farmhouse and associated buildings in the area. Pollution risks are basically agricultural. Furthermore, the local geology does not allow for natural denitrification which can sometimes occur in sub-strata. A stream passes close to the borehole.

In view of these facts brought to light in the preliminary study, a protection zone has been proposed by a professional hydrologist. He has recommended:

*** the maintenance of the existing protection zone;

*** the protection of the stream on the approaches to this zone;

*** the creation of a second zone divided into two:

a sensitive 14ha zone. The very strictest Departmental rules are to be applied there (R1);
an extra 30ha zone with more flexible rules (R3).

By way of example, here are some of the prohibitions put in place:

making a quarry, a pond, drainage, destroying banks and hedges;
spreading poultry slurry and the continuous silage feeding of animals are forbidden in R1.

The use of pesticides is banned in R1 but is controlled in R3 by a list of products that can or cannot be used. The spreading of manure is forbidden in R1 and allowed for one month only in R3

The project has been put to a public enquiry. This procedure gives the public the opportunity to consult the file for one month and to comment on it in the Mairie. After local people have given their opinions, the file goes before an administrative body and at the end of these deliberations the project is approved or not by the Prefect.

- Local Success.

In Mellionnec there is only one farmer in the area concerned. He has accepted the establishment of the security zone and has agreed to abide by rules which could be a hindrance to his production. In exchange for his promise he will be reimbursed according to a fixed scale

The zone scheme has been well accepted locally and seems to be on the way to fruition. However, hitch-free development is not always possible and the creation of safety zones can cause tensions, with private interests at times coming into strong conflict with communal interests

It is essential to monitor the development of the quality of Villeneuve's water during the years that follow the establishment of the security zone which, it is to be hoped, will guarantee water quality for future generations

MANAGEMENT OF THE PEAT-BOG OF STANG PRAT AR MEL

The second example we are going to illustrate concerns the preservation of a remarkable natural site, the peat-bog of Stang Prat Ar Mel in the commune of Lescouet-Gouarec. In an indirect way what happens here has a bearing on maintaining water quality, since this wet area at the head of a tributary of the Crennard stream forms a purifying buffer zone in respect of pollution risks in the water courses

- A Particularly Rich Environment.

The Stang Prat Ar Mel wetland extends over 75ha. It is made up of a very wet central zone around which are ranged several different environments. This zone has long been established as a heritage interest site where the conservation of habitats and species is sought

A regional team of scientists has been conducting research there since 1984 and the zone has been registered on the list of Natural Zones of Faunal and Floral Ecological Interest (ZNIEFF). In general peat-bogs provide special environments for vegetation. A cold micro-climate exists in them throughout the year: they can even freeze on summer nights. Because of this, plants that have survived from the Pleistocene (e.g. the tufted flax, linaigrette), which should have disappeared because of climatic change, have found refuge in peat-bogs. The poverty of peat-bog soils and the presence of water result in a special kind of vegetation

On the Stang Prat Ar Mel site there are 19 noteworthy plants, four of which are protected:

*** Sphagnum Pylaie moss (a plant of European-wide interest);
*** Round-leaved moor-grass (Drosera rotundifloria);
*** Transitional-leaved moor-grass (D. intermedia);
*** The underwater moss Lycopodium inundatum.

The animal world is also present in this area, since the regular sighting of the European otter has been registered and the blond curlew nests there. Entomological interest is provided by the

presence of a rare butterfly, the swamp blue, a grasshopper and an ant, previously considered to be mountain insects

- An Individual but not very Effective Status

The ZNIEFFs (see above) provide a useful tool for knowledge of the French natural environment. The listing programme on a national scale was inaugurated in 1982 by the Minister for the Environment. Its aim is to have as complete a register as possible of natural sites where interest lies either in the balance and richness of the ecosystem or in the presence of rare and threatened animal and plant species.

The ZNIEFF zones are classified into two groups:

> TYPE 1 : demarcated sectors characterised by their notable biological interest. Stang Prat Ar Mel falls into this category.
>
> TYPE 2 : large naturally rich and relatively unchanged assemblages or those that offer significant biological potential.

Before undertaking any project (roadworks or farming) it is obligatory to consult the list. The aim of this is that environmental issues be addressed before it is too late. A project which omitted to mention the presence of a ZNIEFF in its impact study would be refused. However, the ZNIEFF status gives no official protection and very often initial studies limit themselves to listing ZNIEFFs involved without really taking them into consideration as the actual work proceeds

Peat-bogs have been included as Natura 2000 sites at the heart of the European Community directive 'HABITATS'

- A Threatened Zone: a neglected environment.

Because traditional agricultural practices have been abandoned (e.g. pasture, reaping, etc.) and because of turf-cutting, the peat-bog tends to fill up through progressive encroachment of vegetation and in time becomes bushland. Finally the environment runs the risk of wooding over completely and of losing its special attraction. Human intervention allows the biodiversity to be maintained, but recent change towards a more intensive agriculture has led to the abandonment of the peat-bog and the surrounding water meadows which were previously well maintained. Some damage has resulted from human activity

In 1993 in the course of 'remembrement' (that is the rationalisation and modernisation of field systems, access and ownership) put in place by the Departmental Agriculture and Forestry management, a large farm road was built up to the water course of the peat-bog, threatening it with drying out.

- Towards Recovery

In 1993 following tests carried out by the Environment Federation of Central Brittany (FCBE), the first management schemes were put in place. Initial work, financed by the General Council of the Cotes d'Armor, enabled the damage caused by the farm road to be repaired. After that the site was registered in the 'LIFE, peat-bogs of France' programme. This is a powerful financial tool that can be used only in exceptional environments on important sites, therefore the Lescouet-Gouarec peat-

bog had to be included in the register of a total of 38 French sites. Because of this 400,000FF were made available over three years for managing the site. Half of the funds come from the European Union, the rest come from the state and the General Council equally. Accordingly, it has been possible to take concrete management strategies

In 1997 a five-year renewable agreement was signed with a local farmer who owns 23.3ha of Stang Prat Ar Mel. He has engaged to ensure maintenance of the site by using it as animal pasture. The farmer will be reimbursed

In 1999 three ha of heathland have been cleared by a specialist forestry company. Since 1998 19.4ha have been bought by FCBE. On this type of site land management is absolutely essential so that there is coherent control of the entire site. If work already completed on the site has led to substantial progress, nevertheless some surrounding water meadows feeding the pond which drains from the peat-bog are today unfortunately in a state of neglect

In partnership with the neighbouring farmers, technical and financial means must be found to manage this mixture of peat-bog and water meadows which forms a coherent ecological assemblage

Through this example, therefore, it would seem that even if notable natural environments are often listed, there are not always sufficient legal safeguards to protect them. In order to save such places from damage and dereliction it is necessary to take the first steps at the local level. It is possible to get money to finance these initiatives from various environmental programmes. However, obtaining funds on a continuing basis can never be automatic: the financial aspect can be a major obstacle to getting management work under way

The management association, land owners and farmers working in the zone make up another key to the success of the project.