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STEERING COMMITTEE FOR THE CONSERVATION AND MANAGEMENT
OF THE ENVIRONMENT AND NATURAL HABITATS (CDPE)

Group of Specialists - Protected Areas
(PE-S-ZP)

CAMARGUE NATIONAL RESERVE
(France)

On-the-spot appraisal

by

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with observations by the
Secretariat representative

I. INTRODUCTION

1. In 1966 the Camargue National Reserve was awarded the European Diploma, Category A. In accordance with the Regulations the diploma must be renewed every five years, after an on-the-spot appraisal by an independent expert.

At the request of the Council of Europe in a letter by Mr Ferdinando ALBANESE, Director of Environment and Local Authorities, dated 10 July 1990, the undersigned, Dr. E KUIJKEN (Belgium), carried out the appraisal.

2. The on-the-spot appraisal took place on 21 and 22 August 1990, with the participation of Mr Hector HACOURT from the Council of Europe Secretariat and Mr M JOUVE, representative of the Environment Ministry in Paris. The Director of the reserve, Dr. Eric COULET and his colleagues were responsible for the practical organisation of the visit, the guided tours of the reserve and the meetings with local authorities. Thanks to the competence and efforts of Mr Coulet and his team, it was possible to gather all the necessary information in order to judge the state of the reserve and to assess management problems. Similarly, a discussion with the persons in charge of the Camargue Regional Nature Park as well as representatives from the regional press - held at the suggestions of the Council of Europe Secretariat - was very helpful.

3. We would like to express our gratitude and sincere thanks for the efforts made by Mr Coulet and for his efficient co-operation.

4. On 23 August 1990 we carried out a private visit of the Tour du Valat Biological Station; our conversations with the Director, Dr. L Hoffman and his colleagues, who were kind enough to devote some of their time to us, as well as the visits carried out in the proximity of the national reserve, enabled us to gather additional information concerning the region's ecological situation in the area.

II. AIMS OF THE APPRAISAL

5. Thanks to the discussions with the above-mentioned persons and bodies, and the on-the-spot visits, it was possible to compare the state of the reserve at the time the European Diploma was last renewed with the present state. By examining annual reports and scientific research (1986-89), we were able to gather a considerable amount of specific information on the studies and improvements carried out.

6. This appraisal aims first of all to consider the recommendations in Resolution (86) 15 adopted by the Committee of Ministers on 19 June 1986 and to propose measures to be taken when the diploma is renewed for the period from 1991 to 1996, having regard to the Category A classification criteria specified in the diploma. Attention is drawn to management problems in the broadest sense so as to convince the competent authorities that it is still possible and necessary to carry out improvements despite the devoted work of the reserve's management team.

III. PRESENT SITUATION OF THE CAMARGUE NATIONAL RESERVE

(On-the-spot findings, matters reported by the management team and comparison with available reports)

7. Consequences of 1986-90 weather conditions:

- a. The impact of recent harsh winters (1985-86-87) on vegetation is still apparent.
- b. Following a very mild winter (1988-89), the major drought of 1989-90 had a negative effect on the natural environment. However, replenishment of the fresh water pond prevented it from drying out completely; salinity in the lagoons increased considerably and slightly to affect plant growth and impair the reed beds. However, side-effects on bird populations may be regarded as negligible.
- c. Rising sea level, combined with the effects of the drought (and rabbits) is causing the dunes to regress from the coast; priority should be given to pursuing the programme to stabilise and protect the dunes.

8. Internal and external environmental management; scientific research

- a. The national reserve lies mainly in the lagoon-marine area of the Camargue, and contains relatively few dry and less salty environments, apart from the dune systems. The other reserves, in particular the Tour du Valat/Petit Badon voluntary nature reserve and the Palissade (coastal conservancy) are more representative of the river and lake systems found throughout the Camargue, which indicates that the environmental functions of these reserves complement each other and that management of these areas must take account of their fundamental differences.
- b. In order to guarantee the necessary effective coherence between all areas of the Camargue that are classed as reserves or protected areas, it would be desirable to develop a general management plan with specific objectives. The plan should, first and foremost, strengthen biotic conditions as far as possible to ensure that maximum natural diversity of the habitats is maintained to allow full development of the flora and fauna. It is essential that a long-term development plan defining the main lines of environmental management with relative firmness be drawn up for the national reserve, holder of the European Diploma.
- c. Thanks to the scientific research carried out by the various teams (national reserve, CNRS, Tour du Valat), an impressive amount of information is available which would enable such a general management plan to be drawn up on a joint basis. The basic studies and the "bio-monitoring" surveys permanently carried out by the small team at the national reserve are remarkable as a source of scientific data, for both fundamental and applied research. The team should be sincerely congratulated, considering the other practical and educational tasks carried out.

Nonetheless, it is desirable and even essential that the SNPN (National Nature Protection Society) receive additional funds so that the team can recruit a number of extra staff with scientific and technical training. At present, Dr. Coulet's team carries out studies and appraisals at the request of the authorities of the regional park and other bodies, in an attempt at partial self-funding. This development is positive insofar as these studies do not encroach upon the time needed for research, management and education in the reserve itself.

- d. The reserve's external management must prevent negative influences originating in neighbouring zones from causing environmental impairment within the reserve. For example, the quality of fresh water from farmland, used to irrigate the marshes needs to be permanently monitored (heavy metals, pesticides, fertilisers).

Internal management entails the choice of different techniques used when intervention, in natural processes proves necessary. For example, the pattern of plant communities may be determined - if at all - by techniques such as:

- . monitoring of the water regime (duration and degree of flooding, salinity);
- . monitoring of the intensity and type of grazing, whether permanent or seasonal (preferably with breeds of horses and bulls typical of the Camargue);
- . direct monitoring of wild animal populations;
- . or quite simply by lack of intervention (very difficult!).

A further example of a spontaneous process is the formation and growth of mollusc beds, which is likely, for example, to isolate the Vaccarès lagoon and bring about changes in salinity, underwater plant species and fish populations.

- e. By taking account of the unpredictable nature of climatic and hydraulic factors, general management respects the "natural" dynamics of the site (although it has been largely artificial since the dykes were built in the 19th century). Where it is considered that certain spontaneous processes may have negative effects, active management is required, despite the fact that the area covered by the diploma falls within Category A.

On account of the international importance of the habitats in the reserve, it is felt there is a need to take technical action in order to preserve and, where possible, restore the different environments making allowance for their individual degree of salinity, type of succession, age and maturity. It is desirable that certain major and definitive decisions be taken by a joint scientific committee comprising all persons in charge of the reserves and protected areas of the Camargue. The national reserve staff will be able to play an important advisory role in this committee as regards scientific and technical adviser.

- f. Problems concerning management of dunes and dry grassland: as a result of the storm in 1982, the coastal dunes have receded considerably. A successful programme to fix these mobile dunes is still under way (fencing and netting) but results are jeopardised by an excessive rabbit population.

Moreover, the recent drought has led to additional problems concerning restoration of plant cover in all dry areas (fossil dunes and turf). It is essential that the rabbit populations be actively limited; at present, rabbits are caught and released outside Camargue.

We believe that priority should be given to saving the very rich vegetation of the dunes and dry grasslands. Consideration must be given to the possibility of recreating this kind of very vulnerable and rare habitat, even outside the national reserve.

9. Installations and educational activities

- a. Continuation of the partially completed work to convert Salin de Badon into a managed reserve (250 ha) with reception centre for visitors is an example of the way the educational role of the National Reserve is developing. The environmental functions of the salt marsh (grazing, hydraulic control) are combined in perfect harmony with the educational function of the centre, which is due to be officially opened in 1990 (nature trails, three wooden hides with protected access).
- b. Funding needs to be found so that the Capelière information centre may be modernised. The exhibition with explanatory notices which has been on show for several years should now be renewed and replaced, using with modern designs and educational techniques which might attract many more visitors. Similarly, a growing number of well-informed amateurs visit the centre in search of information on the environment, maps, brochures and other publications.

Thanks to the team managing the reserve, sets of educational fact sheets will be available. Nonetheless, it is necessary to find funding to increase the frequency of new publications, which should contain information suitable for each category of visitors.

- c. The guided tours organised by Dr. Coulet's team make a fundamental contribution to education and training. As in all European countries, public interest in this field continues to increase with the result that the two centres will need to allocate more resources and staff for that purpose. It is clear that the guided tours and training courses must make some profit; however, they will never be able to be self-supporting, not even partially (for example during the holiday months). If at present a delicate "balance" has been achieved between expenditure and income, this is partly due to the recruitment of two conscientious objectors.

- d. It will be very important to develop La Gacholle Lighthouse as soon as it becomes the property of the SNPN (with the approval of the Environment Ministry). If the lighthouse were converted it could provide the growing number of tourists on the sea dyke with a more significant demonstration of the principles of conservation.
- e. It would be very helpful to extend public opinion surveys so as to adapt reception facilities to visitors' wishes and educational requirements.

10. Supervision

- a. Facilities for supervision of the National Reserve are not commensurate with its layout and area (13,000 ha): the service vehicles and radio communications are still inadequate, a warden's post remains unfilled etc.

Fortunately, the team's researchers and technical staff meet a large proportion of the needs for round-the-clock supervision, by their presence and activities throughout the reserve.

- b. Offences committed by the public in the reserve have virtually ceased, probably as a result of changing attitudes towards nature. Problems continue to arise in the Amphise area despite the presence of wardens who report every infringement.

11. Hunting and fishing

- a. Although hunting is prohibited in the reserve, the pressure of hunting in the vicinity is too great to allow ideal conditions to prevail in the Camargue, particularly as regards wintering and migrating waterfowl. Problems include: hunters (often foreigners) on the very boundaries of the reserve; lead poisoning; battues for wild boar on account of the (often merely alleged) damage they cause.
- b. It would be helpful to investigate more fully the advantages that would be reaped as regards protection of the reserve if all the shores (N and NE) of the Vaccarès came within its boundaries. The result would probably be to reduce both the disturbances suffered by fauna and the impact of hunting and fishing on the ecosystem, and to favour more effective development of these shores for typical birds and plants. It would be very advantageous to purchase the land concerned, although other solutions probably also exist.
- c. The 1975 classification of the Mornès peninsula as a "nature reserve" was made permanent by decision of the Council of State in April 1988, thus providing an essential sanctuary for the waterfowl.
- d. On account of the shrinking of several European wetland areas, wintering places such as the Camargue are becoming increasingly important. This environmental function which is vital for a fair number of populations of migratory species can only be guaranteed if there is a genuine overall lessening of the pressure of hunting.

In this connection, measures need to be taken at different administrative levels (state, département, region). Priority must be given to the shortening of the hunting season which opens on 1 September and lasts until the end of January (national legislation!) The authorities of the département could do more to control hunting around the national reserve, for example by setting up buffer zones. The designation of a hunting reserve extending two miles seawards is an excellent initiative. Similarly, very positive progress is being made as regards the ban on hunting on the land purchased by the Coastal Conservancy.

- e. The fishing rights applying to several of the lagoons should be reviewed in terms of the impact on the natural functioning of the ecosystems, so that water levels may be adjusted according to environmental needs.

12. Relations with farming

- a. As mentioned above, relations between the national reserve and the agricultural sector exist at several levels, particularly as regards the water system and grazing. Such relations call for a spirit of co-operation and mutual understanding. Nonetheless, nature conservation in general, and management of the reserve in particular can no longer tolerate the fact that farmers in the Camargue still receive subsidies for the clearing and levelling of land for rice cultivation.

The award of subsidies in the context of EEC socio-structural measures must be guided by prior scientific opinions (a possible role for the Regional Park).

- b. Where farming leases are granted, over-grazing must be avoided. Only extensive grazing as part of a management plan is permissible. With a view to possible restoration of the "natural" grasslands, it is desirable that problems with stock-breeders (over-grazing, enclosures, introduction of Spanish bulls etc) in the Amphise area be overcome, with the help of the regional authorities. In particular, the national property administration might make further efforts to facilitate management by the SNPN.
- c. Replenishment and irrigation canals should be made available, when not required for rice cultivation, in order to ensure the necessary supplies of fresh water to maintain the marshes in the various reserves.
- d. Concerning use of pesticides, it would be helpful if the authorities of the Regional Park encouraged the development of organic farming, for example in "buffer" zones. Permanent checks on water drained from farmland are therefore still necessary.

13. Relations with the Regional Nature Park

- a. A number of the above paragraphs refer to relations with the region and regional authorities.

The roles and aims of the reserve are different but complementary to those of the regional park. As the national reserve forms the core of the park, its environmental requirements should be given priority. Within the park, the interests of all sectors must find balanced expression in the general management plan mentioned above. The park authorities are best placed to improve concertation and reconcile the interests of conservation, farming, tourism, hunting and fishing, ...

The fact that the national reserve has been awarded the European Diploma should give the Park authorities considerable moral support to convince all other users of the unique importance of the reserve.

- b. A real increase in general conservation grants in the Regional Park budget would be desirable.

14. Approaches and thoroughfares

Given the large number of visitors, the situation may be seen to be favourable. The sea dyke has been repaired and attracts a great many tourists (only cyclists and pedestrians). An official directive issued in 1989 by the Prefect provides for an annual list of all persons allowed into the reserve.

15. Funding

- a. The financial contributions from visitors to the reserve (information, guided tours, courses) can never result in financial self-sufficiency;

As pointed out on several occasions above, the competent authorities will need to increase funds for capital investment and administrative and technical costs. In addition, salaries must be adjusted as they are disproportionate to the specialised activities;

- b. It is desirable that State funding of the SNPN be as direct as possible. Government grants must be made as early in the year as possible so that administrators do not have to suffer irksome delays;
- c. The problem of funding was already raised in the 1975 and 1984 appraisals. In view of the reserve's important role in the regional nature park, it is suggested that the park authorities also increase their financial support.

16. Legal status and land tenure

- a. A long-term agreement on management of the national reserve was signed in 1986 between the SNPN and the Ministry of the Environment;
- b. Problems continue to exist concerning relations with the Amphise property; the status of Mornès has now been fully satisfactory since 1988; occupation of la Gacholle lighthouse by the SNPN will considerably benefit educational activities;

- c. The area of the national reserve has not changed for a long time. However, private lands and crucial enclaves still exist. Ways should be found of enlarging the reserve in the most environmentally-sensitive zones.

IV. Conclusions

17. Assessment

This report attempts to assess the general situation of the national reserve which is at the very heart of the Camargue. Attention is drawn to aspects concerning management, education and external relations.

In addition to the very positive findings as regards research and management activities, which deserve sincere congratulations, a series of suggestions and recommendations will be drawn up with a view to offering constructive encouragement for the various competent authorities. It is hoped that in this way future reports will be better able to follow up and assess the points raised.

In the case of the most important problems, the authors of this report have taken the liberty of formulating a number of specific recommendations (section V).

18. Follow-up to 1986 recommendations

Follow-up to the previous recommendations has generally been good:

- a. the financial situation allows for essential management and planning for the reserve; it has been proved that self-financing will always be limited;
- b. there are very few infringements of the ban on hunting in the reserve;
- c. the physical and biological integrity of the reserve and regional park is not threatened by industrial activities, installations or buildings (no prospecting and sampling etc ...).

19. Conclusion

Having undertaken an exhaustive study of the scientific, technical and administrative data available, we recommend that the European Diploma for the Camargue National Reserve (Category A) be renewed. Among all the considerations and suggestions made the following recommendations should be acted upon in order to foster a sustainable and balanced conservation and development policy based on the environmental carrying capacity of the entire Camargue region.

V. Proposed recommendations

20. National authorities:

- a. increase funding sufficiently to extend the protected areas as desired, to cover running costs and to adjust staff salaries in line with other comparable levels;

- b. ensure that government grants to the SNPN are made regularly and as early in the year as possible;
 - c. reduce pressure from hunting, particularly shooting of waterfowl, by limiting the open season to between the beginning of September and the end of January.
21. Regional authorities:
- d. encourage conservation efforts and increase funding of the national reserve by means of a system of special grants;
 - e. promote closer co-operation between the persons in charge of the regional nature park and the national reserve, so that the reserve's team may play a more important scientific and technical advisory role;
 - f. as far as possible set up an environmental buffer zone around the reserve, for example by means of land purchases, the renting out of hunting and fishing rights and agreements with the agricultural sector.
22. National Reserve administrators:
- g. set up a comprehensive management plan in agreement with the authorities responsible for management of all the protected areas in the Camargue;
 - h. actively pursue the current activities to improve the water system, with a view to establishing a balance between the ecosystems concerned; on the basis of the results of relevant scientific research, monitor the impact of use of other management techniques, such as extensive grazing;
 - i. resolve as soon as possible and with the help and support of all the competent authorities, the problems of over-grazing in the Amphise area; embark on restoration of dry grasslands, a habitat which, despite its great botanical diversity, is severely threatened throughout the Camargue region;
 - j. as regards information policy, continue efforts to distribute of documentation to meet the wishes of the visitors questioned on the subject; continue these efforts in order to increase frequentation of the reserve's visitor centres.

Secretariat observations

The Secretariat fully agrees with the information and conclusions presented by the expert; however, it wishes to add the following three comments:

1. Dr Coulet and his team have achieved out remarkable results in the field of information. However, the task is far from complete, particularly since information must be constantly updated and disseminated as widely as possible to reach the maximum number of visitors. The necessary resources should therefore be provided by the competent authorities;

2. the situation concerning the beach and the sea dyke no longer bears any resemblance to the situation that existed several years ago. It should be remembered that during the tourist season previously, the beach was literally invaded by camping and caravan sites and very large numbers of visitors flocked to the dyke. At present, only cyclists and pedestrians have access to the beach and dyke. It is a fantastic achievement which proves that one should never give up hope;
3. the discussions between the visiting expert and representatives of local associations and the media, inaugurated in 1989/1990 have proved their value and it is vital that the practice be continued for subsequent visits.

The Secretariat has prepared a draft resolution which appears in the appendix to this report.

APPENDIX

DRAFT RESOLUTION

concerning renewal of the European Diploma
awarded to the Camargue National Reserve (France)

The Committee of Ministers, under the terms of Article 15.a of
the Statute of the Council of Europe;

Having regard to Resolution (65) 6 instituting the European
Diploma;

Having regard to Resolution (66) 22 awarding the European Diploma
to the Camargue National Reserve,

Hereby renews the European Diploma awarded to the Camargue National
Reserve in category A until ... 1996;

Recommends that the competent national and regional
authorities:

1. increase the funds allocated to the reserve with a view to ensuring appropriate management and achieving the desirable extension of certain zones by adding "buffer" zones; grants to the Management of the reserve should be made regularly and as early in the year as possible;
2. give absolute priority to reducing the pressure of hunting along the external boundaries of the reserve, by shortening the shooting season and/or by acquiring the relevant hunting rights;
3. step up co-operation between the persons responsible for the regional park and those responsible for the reserve with a view to enabling the latter to assume a greater role as scientific adviser;

Recommends that the authorities directly responsible for
management of the reserve:

1. draw up a comprehensive management plan for the reserve, to include specific objectives; the plan should be drawn up in agreement with the persons responsible for all protected areas in the Camargue;
2. actively pursue such water engineering activities as necessary to establish a balance in the reserve's ecosystems;
3. monitor the use of certain management techniques, such as extensive grazing, on the basis of results of scientific research;
4. step up public information services: for example by directing tourists to the reception centres, distributing documentation in accordance with visitors' wishes (as expressed in the survey carried out), increasing as far as possible the number of guided tours in the reserve etc.