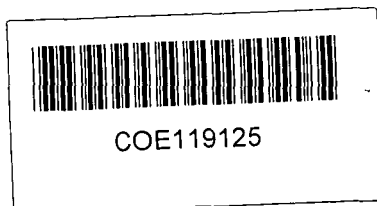


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EUROPEAN COMMITTEE FOR THE CONSERVATION OF NATURE AND NATURAL RESOURCES

Working Party - European Diploma

Nature Reserve the "Hautes Fagnes"
(Belgium)

Report on the on-the-spot appraisal
7 - 10 October, 1975

by

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INTRODUCTION

The Nature Reserve "The Hautes Fagnes" was awarded the European Diploma for Nature Reserves by the Council of Europe on March 29, 1966. On September 22, 1971, this diploma was renewed, because the scientific assets of the reserve were preserved very well and the international significance of the area had increased as a result of careful and adequate management.

On 12 and 13 November 1970, the status and the development of the reserve were studied for the renewal of the European Diploma during an on-the-spot appraisal by Prof. Mörzer Bruyns from the Netherlands. The results were published in document CE/Nat (71) 16 revised, dd. 30 April 1971.

Since 1971 the Nature Reserve Hautes Fagnes-area has been managed another five years. For the renewal of the European Diploma, another on-the-spot appraisal was necessary.

The terms of reference for the expertise were the following:

1. Studying the present state of the site and thus ascertaining whether the site has improved, deteriorated or remained the same since the diploma was awarded or since the first renewal;
2. Analysing the state of conservation of the flora, fauna and landscape (progression or regression of species);
3. Examining alterations (material or legislative) already completed or in progress;
4. Studying the impact of the public on the flora, the fauna and landscape and making proposals for improving the situation;
5. Studying the impact of visitors in the area.

The visit for the on-the-spot appraisal was arranged on 7-10 October 1975. The Rapporteur was accompanied by M. H. Hacourt representing the Secretariat General of the Council of Europe. Prof. Dr. A. Noirfalise of the Faculté des sciences agronomiques de l'Etat, Gembloux, and members of the Belgian delegation with the European Committee for the Conservation of Nature and Natural Resources, organised the on-the-spot appraisal. They provided the Rapporteur with information concerning legislation, administration and organisation and concerning important changes in the management of the reserve.

The Haute Fagnes Nature Reserve is managed by the "Service des Réserves Naturelles et de la Conservation de la Nature de l'Administration des Eaux et Forêts". Address: 29, Chaussée d'Ixelles, B. - 1050, Bruxelles.

M. Létocart, ingénieur des eaux et forêts of the cantonment Walhorn (Inspection Dolhain) and Dr. René Schumacker, director of the Station Scientifique des Hautes Fagnes of the University of Liège, guided the visits in the reserve on 8 and 9 October. They led the Rapporteur to all important sites explaining which problems existed and what was being done to solve them. They gave many details concerning national changes in flora and fauna and concerning all management measures taken to preserve the assets of the reserve. The Rapporteur visited the most important parts of the reserve in this way. He had full opportunity to orientate himself and was able to judge the state of conservation of flora, fauna and landscape of the reserve, particularly so since he could compare the 1975 situation with that of 1970.

The conclusion of the on-the-spot appraisal may be summarised as follows: the conservation, legislation and policy of the Belgian Government as it has developed in the past five years and was applied in the Nature Reserve the Hautes Fagnes, have strengthened the conservation status of the reserve considerably. The assets of the reserve are better protected in 1975 than they were back in 1970. In several respects, the situation in the reserve has improved since 1970, due to sound and wise management. The renewal of the European Diploma for the Nature Reserve the Hautes Fagnes is deserved in all respects.

This conclusion is based on the following facts:

I. - Conservation status of the reserve

The conservation status of the reserve has improved in several aspects since 1971. Several areas have been added to the reserve and new legislation strengthened the reserve status.

1. Increase of area

- a. In 1973, 210 hectares of the Cléfay Moss hag, belonging to the municipality of Elsenborn, was purchased. In 1974, the remaining part of this area, 38.42 hectares of Bütgenbach and 30.39 hectares of Taymonville, were added to the reserve. The total area of the Hautes Fagnes Crown reserve is now of 3 990 hectares.
- b. The "Amis de la Fagne" association at Verviers has signed an agreement with the municipality of Raeren to protect a section of the "Raerener Stuhl". This area possibly can be added to the reserve in the future.
- c. the municipality of Raeren decided to leave in its natural state an area of 51 hectares near the Kutenhart part of the Nature Reserve. Discussions started with Elsenborn about the conservation of about 200 hectares of forest area, the "Roerbusch".

2. Laws and regulations

Several new laws and regulations have strengthened the conservation status of the Hautes Fagnes reserve considerably.

a. Loi pour la protection de la nature (1973) (Nature Conservation Act)

This law forbids in reserves such as the Hautes Fagnes all activities which could be dangerous for the reserve, for instance: picking flowers, damaging vegetation, disturbing animal life, collecting naturalia, making fire, etc. The details for management are worked out in :

b. Règlement des Réserves Naturelles Domaniales (Regulations for State Nature Reserves)

This "règlement", which will be valid for all nature reserves in Belgium, is approved by the "Conseil Supérieur de la Conservation de la Nature", but is not yet officially functioning. The final approval is expected in 1976.

c. Loi sur l'Urbanisme et l'Aménagement du Territoire (1972) (Town and Country Planning Act)

This law is of great importance for nature conservation since it prohibits the afforestation, reafforestation or cultivation of natural areas (zones naturelles), such as the Fagnes. The law has already been important for the conservation of several areas in the Hautes Fagnes region which are not part of the reserve, since these areas would otherwise have been afforested.

d. Parc Naturel des Hautes Fagnes et de l'Eifel

To integrate the Hautes Fagnes Nature Reserve as an element in the "Parc Naturel Hautes Fagnes-Eifel" was an important decision; the Park comprises about 60 000 hectares in Belgium and in Germany. It gives extra protection to the nature reserve, for instance in relation to the setting up of buildings and other constructions near parts of the reserve.

II. - Conservation of flora and vegetation

The characteristic vegetation of the Hautes Fagnes and its typical flora elements, well-known and described in publications and previous reports are well preserved all over the reserve. The situation is comparable with 1970. Locally, the botanical assets have been improved through special management measures, such as prevention of excessive run-off of water and erosion, the elimination of tree growth in certain areas and the regular mowing of certain zones, for instance fire breaks (cf. Chapter on Management).

In some places, along the trails open to the public, the bog vegetation was damaged. This damage was restricted and measures were taken for restoration.

The botanically rich Sphagnum peatbog areas and the large areas of diverse heather vegetation, locally with *Empetrum nigrum*, should once more be specially mentioned, as well as the wonderful mosaics of the very interesting pingo-landscape in the eastern parts of the reserve. All these areas are very well taken care of.

III. - Conservation of fauna

The situation in 1975 is comparable to that of 1970. The increase of certain species has stabilised, in accordance with natural fluctuations. The information concerning the fauna therefore focuses on some species only. The animal species most vulnerable to disturbance or deterioration of the habitat are the mammals and the birds, especially the larger ones. The conservation status for red deer and roedeer particularly improved considerably since 1971 because in 1974 the "Conseil Cynégétique des Hautes Fagnes" was set up. This council co-ordinates the activities of hunters from an area of 15 000 hectares surrounding the reserve. The council organises annual game counts, in particular of deer and roedeer and co-ordinates the management for the maintenance of sufficient cover as well as the winter feeding. The council fixes the number of deer which may be shot and establishes sanctuaries. This is done on the basis of maps of the official hunting area.

The organisation has been of great importance for the game population of the reserve. The deer of the reserve spend a great deal of their time outside the reserve. The managing officers of the reserve have played an important role in the development of the "Conseil Cynégétique".

The fox, as in previous years, is being controlled outside and inside the reserve to prevent the spreading of rabies. The badger and the wild cat, however, are protected as before. Smaller mammals exist locally in fair populations. Thanks to this and to an effective protection, the birds of prey and owls are well represented in the reserve and its surroundings. The situation can be compared to that described in 1970. The Hautes Fagnes reserve and its surrounding areas are also rich in bird life as far as other groups and families are concerned. According to the information of the ornithologists of the Station Scientifique des Hautes Fagnes, the area has interesting bird populations of all the species that are to be expected in a boreal-mountainous climate. This is certainly the result of the strict protection measures in force since 1967.

The black grouse should be specially mentioned as well as the Scottish grouse; although the latter type was introduced many years ago, it had not been observed in the area for many years. The observation in 1975 therefore is remarkable. On the whole, the fauna situation is stable and possibly improving, thanks to the attention given to the animals.

IV. - Conservation of the landscape

The Hautes Fagnes Nature Reserve is famous for its wonderful landscapes, especially the large open fagnes areas, surrounded with forests. In some of the open spaces Picea- and Sorbus trees grow in large numbers, sometimes in sites where treegrowth is not desirable.

Treegrowth is controlled in those places (see management); this is a great advantage for the conservation of the landscape. Plans for cutting and reafforestation of smaller and larger forest areas in the reserve and in the immediate surroundings are made, taking the landscape into consideration in order to improve the quality.

The attention paid to elements other than flora and fauna is an important feature of the management of the reserve.

Geological, geomorphological, hydrological and palynological assets are recognised and important sites preserved very well. The same is done for culture-historic elements such as old roads, old boundaries, sites of settlements, sites where peat has been dug out. Such sites are valuable elements in the Hautes Fagnes landscape. It is important that they be preserved as well.

V. - Management

1. Prevention of fire

Because fires are probably the most serious threat to the reserve and in any case, have always been so, the prevention of fire counts among the most important management measures. Compared to previous years, there have been no serious fires in the last years. This is the result of several measures taken. Among these, the most important are the well managed system of fire-breaks, the three fire watch-towers overlooking the whole area and the organisation of a well-worked out survey system, operating with mobilophones on a special wave length.

The public is warned during dangerous dry periods, when they are not allowed to enter into the reserve. Folders in four languages (French, German, Dutch and English) give clear information concerning the dangers of fire and instructions as to what to do when a fire starts.

The fire prevention management is perfectly organised, in close cooperation with the fire brigades of the neighbouring municipalities which have at their disposal air-planes.

Cooperation with private airplanes to spot the beginning of fires was tried out for some time but was given up since it resulted in too much flying over the reserve.

2. Hydrology

In 1970, the construction of small dams (partly experimental) was mentioned. These were made to control run-off and to prevent erosion more effectively.

The experiments turned out to be useful. In 1975, many more dams (~ 350) were constructed, all functioning well. The Nature Reserves Administration aims at the construction of eventually ± 800 dams. In this way, the effects of the drainage system, constructed long ago for the sake of afforestation of the Fagnes, will be completely eliminated.

3. Vegetation

The vegetation has been managed in a number of sites for special reasons. The result has been the development of diversity of the different plant associations. The management of the vegetation dealt with:

3.1 Restructuration of reafforestation after felling and cutting.

3.2 Elimination of spruce and other trees (from natural rejuvenation from artificial plantations) in parts of the reserve where such tree growth is undesirable. The elimination is done in an area of several hundreds of hectares. No herbicides are used. The trees are taken from the Fagnes individually and taken outside the reserve by reserve staff or burned locally on selected places. Tractors or other vehicles are not used because this would damage the peatbog vegetation.

This is a remarkable achievement, very good for the reserve, but very difficult, time consuming and tiring.

3.3 Mowing and cutting of fire breaks

This is primarily done for the functioning of the fire breaks, but also to maintain the typical Hautes Fagnes vegetation types (for instance Nardetum associations), which develop in such sites. These vegetations add to the diversity of vegetation and plant growth inside the reserve.

3.4 Mowing and cutting of rough vegetation in selected places outside the fire breaks - in total 10 - 12 hectares - to stimulate the development of the above-mentioned vegetation types.

3.5 Special attention is given to sites with special vegetation types and rare plant species, to prevent deterioration.

4. Fauna

All management measures take into consideration animal life in the reserves. Particular attention is given to the larger animals - the mammals and the birds, since they are vulnerable and quickly disturbed.

The most important step taken in the last five years is the harmonisation of hunting (specially of deer) in the areas around the reserve. This has already been mentioned in the paragraph "conservation of fauna". Hunting in the reserve is prohibited since more than ten years.

5. Staff and wardens

The Hautes Fagnes Nature Reserve is managed in different parts by staff of different "cantonments" of the Forestry Service.

The number of wardens is the same as in 1970. Up to now, this number is sufficient to guide and to control the public.

Recently, two specialised reserve-management workers were appointed; they are specially trained to work in the reserve. This new arrangement works well.

6. The public and the impact of visitors.

During the visit in the reserve, special attention was given to management in relation to the public. This was done in the first place because it was mentioned in the terms of reference and secondly because management of reserves in relation to activities of the public today is one of the most tricky aspects of conservation management.

It is difficult, not to say impossible, at this moment to give detailed guidelines as to how to manage reserves in relation to recreation pressure and how to restrict visitors in their activities. These problems are difficult and differ from case to case.

The best is to make a careful study of what happens in the field. Undesirable effects and trends are discovered immediately and measures can be taken to repair the damage done and to prevent further deterioration. The Nature Reserve Hautes Fagnes has been managed for many years according to a number of strict rules for public access and activities. These rules have been mentioned in previous reports. Careful observations are being made in order to find out to what extent rules should be adapted to new situations and which special measures are necessary to prevent deterioration of sites.

This has become an urgent matter since 1970, since the number of visitors increased from about 40 000 in 1970 to about 100 000 in 1975. The increase is considerable and consequently, so is the impact on the reserve.

The following measures to prevent damage being done to the reserve by visitors should be mentioned:

- 6.1 Reserve signs, with a picture of Trientalis europea and indicating the boundaries of the reserve, are being placed; each visitor therefore knows which areas are part of the reserve and which are not.
- 6.2 On parking places - sometimes combined with picknick sites - information and instructions concerning the reserve are given on large display boards. This includes a map giving details about trails, rules, etc. The information is given in four languages: French, German, Dutch and English. All this is beautifully done and the constructions fit well into the natural surroundings.
- 6.3 In the reserve, a network of 40 km of carefully selected footpaths are open to the public, a great deal of which are narrow trails fitting well in the reserve. These trails are well taken care of. On wet and boggy places, they are bridged with poles and logs in the same way the Romans built peatbog roads there. The trails are marked with small posts, the routes are indicated on rough wooden maps, situated near the beginning of each trail.
- 6.4 The reserve is regularly visited by groups (10-12 persons). Many groups are guided - on request - during their visit to the reserve by reserve staff, mostly wardens.
- 6.5 There are special arrangements with the "Les Amis de la Fagne", a society that has about 2 000 members all over Belgium.

Members of the society visit the reserve regularly, individually or in groups of sometimes up to 120 persons.

"Les Amis de la Fagne" have a great interest in all that is going on in the reserve. They often come forward with suggestions and proposals including for measures to be taken and concerning management. The Forestry Service studies these suggestions and accepts those that can be applied.

- 6.6 Intensive use of the footpaths resulted in the deterioration of some parts, especially in wet and boggy places, causing erosion. In some areas this reached such proportions that regeneration of the vegetation did not take place before two years. When this happens, other trails, partly new, are chosen and constructed. The original trails then are closed to the public to give

them time to regenerate. The "new" alternative routes and trails are clearly marked on signboards at the beginning and the end of each trail. This method worked well.

Thanks to these measures, it has not been necessary up to 1975 to restrict the number of visitors per day or per area. The problems of possible "overuse" are studied however.

- 6.7 Although littering is strictly prohibited in the reserve, some litter is left as in (nearly) all nature reserves open to the public. One of the jobs of the staff is to collect and take it to rubbish dumps outside the reserve and the surrounding forests. "Les Amis de la Fagne" organise each year a litter-collecting day in which a large number of members participate. This is a most positive action and very helpful to the Forestry Service.

Comparable work is done outside the reserve, within the boundaries of the National Park; again, this is to the benefit of the reserve.

- 6.8 The Forestry Service published an 8-page folder in order to specially warn the public about the dangers of fire. Produced in four languages and available to the public free of cost, it contains information about the assets of the reserve and proceeds to point out the dangers of trampling, of leaving litter and of fire; it also gives instruction as to what to do in case of fire.

The publication, which mentions the European Diploma of the reserve, was written by Dr. Schumacker in collaboration with the Commission Consultative des Réserves Naturelles Domaniales des Hautes Fagnes.

- 6.9 In 1973, a booklet was published by Prof. A. Noirefalise and Dr. Schumacker. Its 48 pages contain much information about all the aspects of the reserve, including the significance of the European Diploma for the status of the reserve. The booklet was published by the Fédération du Tourisme de la province de Liège and the A.S.R.L. Parc Naturel Hautes Fagnes et Eifel.

- 6.10 Another publication was produced in March 1975 by the University of Liège. It concerns more particularly the new building of the Station Scientifique des Hautes Fagnes near Mont Rigi and Baraque-Michel (address: B-4898, Robertville, prov. Liège). The publication was edited by Dr. Schumacker, with the assistance of several fellow scientists. It gives valuable information about the reserve and the scientific research projects of the Station Scientifique and the University of Liège.

6.11 Visitors from other countries

Persons from other countries regularly visit the reserve and in fairly large numbers. Most foreign visitors come from nearby Germany and the Netherlands. They usually behave correctly and stick to the rules.

There are however sometimes foreigners who do not behave correctly; they do not keep to the trails, they pick flowers, they disturb animals, etc.

Although the rules are given in four languages at the parking places, they pretend not to know about them because they do not know the French language. They **blatantly** refuse to obey the rules, even when a warden asks them to do so. This is quite a nuisance. The difficulty is that they know only too well how complicated (and even practically impossible) it is to fine them, since too many authorities would have to be involved.

VII. - Other problems

1. Recreation facilities

Organisations dealing with recreation development projects regularly ask to be allowed to develop facilities in the Hautes Fagnes reserve. Such requests have always been refused, sometimes with the help and assistance of municipalities of the Hautes Fagnes area.

2. Aircraft

It has been possible to arrange that aircraft not be allowed to fly low over the reserve. This functions satisfactorily. Only military aircraft sometimes break this rule. This is very disturbing for the fauna and is a nuisance to visitors.

3. Military activities

There are no complications or difficulties with military authorities.

4. Road construction

The National Road N 28 from Eupen/Verviers to Malmédy and villages in the Hautes Fagnes area s.e. of the reserve, passes the reserve near Baraque-Michel. It is a main road with **heavy** traffic which has existed for many years. Not long ago, it had to be repaired and partly broadened.

There has been criticism in Belgium concerning this reconstruction work, insofar as it was done "in" the reserve. The Forestry Service did everything in its power to prevent damage being done to the reserve, but was unable to stop the road construction work. Still, its endeavours met with some success, and the inevitable damage was restricted to a minimum. The road-side verges were built in such a way that they look quite natural and form an acceptable transition zone between the road and the Fagnes. Thus the road is well adapted to the natural surroundings.

VIII. - Scientific research

Scientific research is an important element in the reserve. Whether purely scientific and fundamental or applied research, it all contributes to the conservation and management of the reserve.

The research projects are mostly organised by the University of Liège at the "Station Scientifique des Hautes Fagnes", which opened its newest building ("the fourth generation") in 1975.

Research is still done in all disciplines, as in 1970.

Interesting investigations are being made in geology, geomorphology and hydrology. Botanical research is focusing on vegetation-mapping of specially chosen areas and experimenting a new grid-system designed for use in large areas.

Botanists each year collect data concerning flora and vegetation with a view to conservation and management.

Zoological research is being done concerning the ecology of mammals and birds, in particular of birds of prey.

Hydrobiological research is done into algae and biophyta of the two larger rivers in the reserve, the Helle and the Roer.

Applied research is done in all disciplines in relation to the impact of public pressure on ecosystems. The results are used in order to find the best solutions for changes in the network of trails, etc.

The rules of the reserve are also followed up by the scientists. In special cases, special permits for research activities are provided.

A number of publications have been produced since 1970. They are collected and registered with the library of the Station Scientifique des Hautes Fagnes. Results of investigations are also used for popular scientific publications, for instance the brochures and the folders mentioned earlier.

GENERAL REMARKS

The conservation and the management of the reserve are of a high standard. The Forestry Service aims even so at further improvement and development. Good cooperation between the authorities on all different levels has been the basis for the successful development of the last ten years; it is such cooperation that will make it possible to further improve conditions.

In this context, the Rapporteur wishes to make a suggestion concerning the present structure of the management.

At the moment, the management is being taken care of by two "inspections" and five "cantonnements". This involves several levels and makes management a most complicated matter. The Rapporteur therefore sees a possible, and highly desirable improvement, in a simplification of the structure. He suggests that the possibility of reorganising the reserve administration be studied. The Rapporteur feels that it should be possible to have all parts of the reserve, with appropriate surrounding buffer-zones and areas connecting the different parts, united in one area of about 5 000 hectares, managed as a "cantonement" of one "inspection" and headed by one "ingénieur des eaux et forêts".

CONCLUSIONS

The Nature Reserve the Hautes Fagnes deserves in all respects the honour to have the European Diploma for nature reserves renewed in 1976 for the next five years.

Wageningen, 18 February 1976

Prof. M.F. Mörzer Bruyns