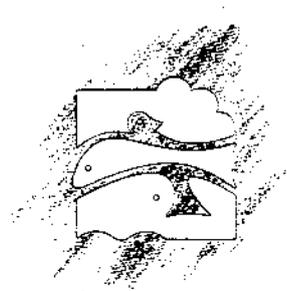


Institute of Nature Conservation



Council of Europe

Application for the European Diplome

'De Weerribben' Nature Reserve (the Netherlands)

Expert Report

by

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A. Introduction

During its Meeting in March, the Group of Specialists on Protected Areas of the Council of Europe considered the application for the European Diplome, submitted for the Weerribben Nature Reserve (IJsselham, the Netherlands) and presented by 'Staatsbosbeheer' (SBB, State Forestry Service), the most important owner and manager of the site.

The Secretary General of the Council invited us to carry out the on-the-spot appraisal as an independent expert in landscape ecology and wetland management. According to Art. 5 of the regulations for the European Diplome, we visited the site from 3 to 5.08.94 with the aim to investigate the proposed delimitations of the zone, the internal and external management measures, the research and educational efforts, the impact of outdoor recreation, agriculture and other activities, etc. We could compare the actual situation in the field with our personal knowledge on the site that we experienced during a stay in 1972.

On the spot, several meetings were organised by Staatsbosbeheer with national and regional officers of the Ministry, with local councillors, representatives of private owners and reed cutters, members of the National Parc consultative council and others. Also the regional press was invited to report on the expertise. Following our suggestion, a visit to the adjacent and important private nature reserve 'De Wieden' (owned by 'Natuurmonumenten') was included in the programme in order to evaluate the status of conservation and possible conflicts with recreation in the whole of both sites.

As usual, we were accompanied by a member of the Council Secretariat in Strasbourg, Mme. Françoise Bauer, who made valuable contributions during the discussions on the status of the reserve and the requirements for the European Diplome.

Also ir. Mark Roekaerts participated as a consultant, being involved with the protected sites database and mapping programme of the Council of Europe.

The succes of our mission was mainly due to the excellent and enthusiastic guidance by ing. Piet op 't Hof, District Officer of SBB, assisted by his colleagues Edo Jans and Sylvie Tuinman (who made an important contribution in translating almost every word in French). They also gave important litterature and reports on the reserve.

We are very grateful to all persons mentioned, as well as to other authorities, colleagues and representatives who spend so much of their valuable time in order to make our visit and discussions as useful as possible.

B. Brief overview of the visit and statements in the field

3.08.94:

evening wellcome and introductory talks at Ossenzijl, recreation centre De Kluft;
present: P. op 't Hof, E. Jans, S. Tuinman, F. Bauer, M. Roekaerts, E. Kuijken;

4.08.94:

present: see 3.08.; also ir. M. van Nederveen and ir. P.A. van de Tweel (SBB);

(1) visitors centre of Staatsbosbeheer:

An excellent and most creative exhibition on history, nature, landscape and people of the Weerribben; very instructive education effort of high standard for a large public that is mainly interested in outdoor recreation and ecotourism. In this centre, visitors are confronted with the risks that their activities can cause for flora, fauna and habitats of the reserve; they get informed about access and regulations in a constructive way.

(2) visit to the reserve:

- Special attention was paid to the ecological management of floating peatland vegetations (mowing of reeds and haylands, problems of forest development, etc.). The management plan is mainly based upon long-term ecohydrological and phytosociological research and monitoring (dr. G. van Wirdum). Several habitats are of great international importance but are very vulnerable and difficult to manage; special techniques and machinery for working on floating peatland (a.o. *Junco-Molinion*, *Caricion curto-nigrae* and *Erico-Sphagnion*) and for digging new ditches ('kraggevreter') have been developed.

Especially the water level and quality management is a matter of concern: hydrological isolation versus inlet of more eutrophicated water from outside in dry periods.

- Confrontation with the problems of free canoeing in smaller canals and ditches crossing the reserve; visitors can disturb breeding birds and some vegetations, although access to most vulnerable zones is prohibited.

- Visit to fully protected zones with emphasis on the importance for rare and endangered breeding birds (purple heron, black tern etc.) Explanation on the management plan for creation/reestablishment of open water, without disturbing the historical landscape pattern of 'weeren' and 'ribben'; discussion about digging and deposit of peat on banks and difficulties for future management other than grazing. This was a nice demonstration of 'restoration ecology' in practice, creating possibilities for regrowth of open water vegetations with *Stratiotes*, *Utricularia* and other interesting species (*Hydrocharition*). This phase is followed by long-term succession processes from pioneer *Typha* and *Phragmites* (*Phragmition*) towards carr-woodland (*Salicion*, *Alnion* etc.) as a climax; the larger the new or restored canals, the slower the process.

- The importance of maintaining vital reedbeds for economic exploitation in the reserve must be subordinate to the conservation interests; especially the need of two year old *Phragmites* for breeding birds such as Great Reed Warblers or Bearded Tit needs a biennial cutting only. In some parts, wood cutting is permitted under strict regulations.

- Sport fisheries (mainly eel fishing) is limited to a few personal licences. Hunting is prohibited in principle. The re-introduction of the otter is considered.

(3) boat trip along the main canal (Kalenberger gracht) from Ossenzijl through Kalenberg to Muggenbeet:

participants: the above-mentioned persons and Mrs. Vosjan (Mayor), Drs. H. Smit (chairman, consultation council of the National Park), Drs. R. van de Wall (Ministry NBLF), Mr. F. Wiedijk (author, recreation society), and others.

- The Kalenberger gracht crossing the nature reserve is intensively used by all kinds of boats for recreation. Embarkation places and picknick sites as well as a bicycle track have been constructed along this canal. The small village of Kalenberg with some touristic concentration is situated in the very centre of the reserve.

- The overall recreation pressure is still increasing very markedly, although concentration points are situated in less vulnerable parts of the area.

(4) Evening press meeting and dinner at Muggenbeet:

- Discussions with the above-mentioned representatives on the problems awarding the Diplome A - category to sites with both conservation and recreation functions. How can the evolution of water tourism be monitored and quantified in order to assess the effect of further limitations when considered necessary?

- Regional and local press was very interested and showed a positive attitude towards the Diplome. Nevertheless, there were critical questions on the future of agricultural land use in the surrounding polders and on the possible restrictions as to outdoor recreation activities as a consequence of the Diplome status.

5.08.94:

- morning visit to the private nature reserve 'De Wieden' (> 5000 ha).

present: see 3.08.94, plus officers of 'Natuurmonumenten', owner of the reserve.

Explanations on the landscape structure and landuse in the area between both reserves as well as comments on threats and conservation values were given (SBB). In the Wieden reserve, the zoning of human influences in a gradient from intensive recreation (on large waterbodies) to closed areas with highest ecological interest was based on the philosophy of attracting people on the less vulnerable sites and educate them not to disturb the important habitats with endangered species.

This interesting comparison between both reserves illustrated the similarities and differences in conservation priorities and management techniques. Most of the succession processes and habitats present were comparable (except large lakes missing in the Weerribben). We observed many interesting flora and fauna elements typical for the low peatland habitat; special attention was paid to management in favour of invertebrates. The techniques are comparable: a.o. preventing of forest development, reed cutting and hay making (sold as a by-product of interest for use in agriculture).

The visitors centre 'De Foeke' has a rather traditional concept and is situated in an attractive old hamlet; numerous visitors (as 'Natuurmonumenten' has a membership of about 750000!) find a lot of useful information on the reserve and the regional landscape. An exhibition pays special attention on the future nature development plans in the surroundings, linking both Weerribben and Wieden in one ecological network, together with Staphorster Veld, Oldematen, the Zwarte Meer towards the Vecht and IJssel rivers (cfr. Nature Policy Plan: 'national ecological network').

- afternoon return to De Weerribben:

- . In the surrounding buffer areas, agricultural land use is including special management regulations. Other parts will be subject of active nature development with the aim to establish higher polder water levels and to restore marshland (to be incorporated in the reserve).

- . Discussions on the compatibility of scattered housing (along Hooge Weg) with the conservation status and aims of the Diplome A category; most of the small houses (in traditional style, very well integrated) are owned and used by SBB for management purposes and personnel. The impact of visitors at attracting points (windmills, small restaurant) remains very locally and seems at this stage not to be harmful to the reserve proper.

- . A short excursion in low-laying peatland with succession towards heathland (*Erico-Sphagnion*) showed results of the eco-hydrologically sound management in species rich vegetations.

- visitors centre at Ossenzijl: 'Weerribben Management Working Group' meeting: present: see 3.08.94, further A. Maas, K. Kuit and J. Deelstra (representing private owners and reed cutting associations).

The discussions, chaired by P. op 't Hof, concentrated on the contracts of reed cutters in relation to the management of the reserve. There is a distinct advantage because of the practical assistance this traditional use can offer to some aspects of management: clearing and revalorisation for reed cutting of parcels with rough vegetations or shrub and wood development. In more vulnerable vegetations, priorities are not to be given to economic use, although transformation towards reedbeds could easily been done as well. Reed cultivators are to be convinced that biennial *Phragmites* is necessary for some breeding birds; this can be reached by cyclic mowing agreements.

- During the final dinner, a recapitulation of our statements and supplementary management aspects were discussed, notably on compatibility of recreation activities and possible environmental threats to the reserve: temporary closing and alternatives of canoeing routes, complaints on exaggerated speed of yachts in Kalenberger Gracht, concentration of recreation impacts in fewer spots with all kinds of provisions (water, waste disposal, used oil etc.). Finally, a proposal for adapted delimitation on the map and the question of classification as Diplome A were considered.

C. Evaluation

(1) International importance of the Weerribben

There is no doubt about the outstanding conservation value of the Weerribben nature reserve. This is a combined result of several factors:

- geographical and eco-hydrological situation (transition zone between higher landscape of the Drents Plateau and the former Zuiderzee (now IJsselmeer with new Polders, of which the Noordoostpolder is situated near the 'lake district' of Noordwest-Overijssel);
- the historical evolution of the semi-natural landscape as a result of intensive peat-extraction since the late Middle Ages; the actual pattern of 'weeren' and 'ribben' (resp. stretches of water and land) is still an authentic remainder of this former land use (historical landscape value);
- the diversity of habitat types in a spontaneous succession gradient from open water vegetations (in lakes, ponds and ditches), to low-lying peatland with pioneer reedbeds (*Phragmites*) evolving to *Sphagnum* bogs and *Erica*-heathland (floating rich-fens or quagfens, moors), species rich grasslands and hayfields (poor in minerals), shrubs and carr-woodland;
- almost all of these stages or habitats including their typical flora and fauna elements are represented in the reserve thanks to an excellent management; this is based upon intensive and long-term monitoring and scientific research, translated in an officially agreed Management Plan 1988-1998; this states the conservation priorities, also taking into account the impact of activities in and around the reserve such as agriculture, recreation, hunting and fisheries;
- the long tradition of reed cutting (now included as a management tool) leading to relatively stabilized succession stages as to reedbeds and related marshland vegetations;
- the large area with protection status and the extension of surrounding buffer areas where ecologically sound land-use is stimulated and efforts for maintaining the required environmental quality are still increased.

The national importance has been safeguarded by application of several legal instruments concerning physical planning and conservation. In 1992 the Weerribben received the status of National Park. In the National Policy Plan (1990) the reserve functions as a core area of the 'national ecological network'.

The international importance is recognised as a wetland on the RAMSAR-list, as a Special Protection Area under the Bird Directive 79/409/CEE and as a Biosphere Reserve.

(2) Landscape ecological threats and mitigating measures

Three groups of threats are most determinant to the actual and future values of the nature reserve:

a. Changes in hydrological regimes in this part of Overijssel occurred for many decades since pumping stations lower the water table, mainly in favour of agriculture (as the peat digging industry almost ceased after the world war). Also the reclamation of the Noordoostpolder caused alterations in regional ground water flow and seepage zones depending on it.

b. The reclamation of large areas of marshes mainly for agriculture caused a fragmentation of the formerly very vaste expances of low-lying peatland areas of outstanding value. This was followed by an increased use of fertilisers and chemicals in agriculture, influencing on their turn the diversity and quality of the remaining nature. Fortunately, two core areas with substantial superficies (Weerribben and Wieden) still have high ecological potencies on their own.

c. The increasing water recreation and touristic activities in general cause a further threat to these wetlands, because of their attractive scenery and good boating facilities. Due to the close vicinity of important touristic towns, the pressure on wetlands in the whole region is extremely high.

As an answer to these threats, already a series of measures and initiatives were undertaken; in addition, **awarding the European Diplome could strengthen these conservation strategies.**

- The national nature policy plan includes projects to restore former semi-natural habitats in ecologically suitable situations. This will be realised in the buffer area of the Weerribben-Wieden complex by highering water tables and connecting both nature reserves by the newly created marshes on former agricultural land or by areas of extensively grazed wet grasslands. When the negative effects of landscape ecological fragmentation have been reduced or removed, the reintroduction of species such as the Otter is to be expected.

- In order to maintain sufficient water at the desired level (and of good quality), the inlet from outside the reserve is sometimes necessary; this requires a flow of the eutrophic polder water through canals and ditches in zones with less valuable habitats before it reaches the most sensitive dystrophic parts of the reserve with floating herbaceous vegetations (the Alliances with quagfens, species rich hayfields and *Phragmites-Sphagnum-Erica* complexes).

- As a result of overall lowering water level, the succession of water vegetation through low-lying peatland to carr-woodland was speeded up. The former traditional reed cutting 'industry' could hardly slow down this process, also because of the concurrence with imported reed (for tached roofs). The reduction of reed cutting in recent years was met by the integration of this activity as a management tool. The historic continuity principle gives at the same time an actual socio-economic dimension to the reserve.

- Since large scale peat-digging ceased to exist, and since the succession accelerated as a result of lowered water tables, the cyclic creation of open water is even more necessary in order to maintain the diversity of occurring habitat types. This is not longer to be done by handwork, so special machines have been developed to open overgrown old canals and to dig new ditches without deposit of peatsoil along the banks ('*kraggevreter*').

In this way, floating rich-fen vegetations that became almost totally fixed on the remaining 'ribben' can again be made free so they can fluctuate with the changing water level. This prevents both flooding or drying of those vulnerable vegetations. Moreover, the digging of small ditches can enhance evacuation of an excess of acidified or eutrophicated water if necessary (therefore, monitoring of nutrient balances, conductivity etc. must go on).

The renovation of open water communities is needed for several fauna elements, as well as a start of further succession processes. This is realised by digging new canals or opening old ones that were overgrown by less valuable rough marsh vegetation and shrub.

- In this open water, the process of low-lying peat formation starts again, which is important for several birds and insects. Because of the small-scaled pattern of traditional 'weeren' and 'ribben' and the fast regrowth of marshland, a new pattern of broader ditches has been created without disturbing the general landscape structure. These remain open for longer periods, also attracting more water dependent species.

(3) Traditional nature management techniques

In order to maintain the great variety of semi-natural habitats and the diversity of flora and fauna, apart from the measures mentioned above, the Management Plan 1988-1998 has set up priorities, objectives and means for 7 types of zones (planning units).

Following traditional 'techniques' are most relevant:

- annual mowing of species rich hayfields/grasslands with removal of hay or green matter (if necessary by burning on fixed spots); some more productive grasslands have to be mown twice a year. For instable soils or floating rich-fen vegetations, light mowing machines and even handwork is needed;
- annual reaping of reedbeds during late 'summer (removal of high amounts of nutrients) or during winter (to strengthen the *Phragmites*-stands);
- mowing reedbeds every 2-3 years to create overstanding reeds for specific breeding birds (see further for discussion on economic aspects);
- mowing or clearing regimes for banks of ditches and canals following needs for specific plants or animals;
- grazing with cattle or sheep (e.g. grasslands for meadowbirds);
- cyclic cutting down of shrub or trees (almost every 5 year) to prevent wood development and to maintain different types of brushwood;
- doing nothing: in the dynamic equilibrium of this fast evolving peatland, about one third of the reserve has been destined to develop to a natural carr-woodland.

The overall nature management is traditionally based upon phytosociological knowledge as a help to maintain the most important habitat types. Nevertheless, growing attention is paid to preserve or re-establish typical biotopes for specific animals: breeding and wintering birds, insects, herpetofauna and mammals. A number of species are endangered, very rare or vulnerable and the Weerribben reserve plays an important role in their survival: e.g. *Chlidonias niger*, *Ardea purpurea*, *Lycaena dispar ssp. batava*, *Natrix natrix*, *Lutra lutra*. The number of rare plant species and communities is impressive as well (some of them only occurring in this reserve).

(4) Monitoring and research

It is important to mention that considerable efforts are made for permanent monitoring, mapping and additional inventories of flora, fauna, water quality etc. This is realised with the help of both professional scientists and amateur field biologists. Results are brought together in interesting reports and publications.

(5) Facilities for the public

Although the Weerribben is suitable indeed for various kinds of recreation focussed on nature such as boating, canoeing, bicycling and walking, the provisions made to facilitate these activities could easily cause future difficulties when the increase of ecotourism, especially of water recreation continues. Awarding the Diplome A category is only to be considered when possible conflicts can be avoided.

From the Management Plan, we learn that the main objectives of the reserve are:

- to protect and develop (internationally) important habitats and species;
- to conserve the typical peatland-landscape;
- to contribute to a water management that is suitable for vulnerable ecosystems;
- to facilitate the contact of the public with nature to notice and enjoy its values.

In order to integrate nature education and recreation with conservation proper, a zoning of the reserve according to vulnerability has been established. Accessible sites, temporary or permanent closed areas, nature trails and guided visits are tools to canalise the public.

Concentration points for touristic activities (recreation centre and public ecological centre of SBB at De Kluft). So the visitors can learn how to behave and get convinced about the need to for total close of some parts and the limited recreational use in general.

Active water recreation using larger boats is mainly allowed in the Kalenberger Gracht and some other main canals crossing or surrounding the reserve. There are a limited number of embarkation sites with picknick facilities in the reserve and where overnight stay is allowed for 48 hours. The disturbance from here seems to be limited (also thanks to intensive control), but the carrying capacity of the Kalenberger Gracht itself as to temporary embarkment is not infinite!

Smaller secondary canals and ditches are open for canoes, rowing boats and motor boats (some of them 'low noise') with maximum width of not less than 2.3 m (!). For this category, the number of landing places in the very centre of the reserve is quite high and questionable; the same is true for the density of the network of accessible canals and ditches, so that the terminology of 'extensive recreation' does not longer holds.

Consolidation of the actual high recreation pressure seems to be in conflict with the *Diplome A* status, even when the most active centres (De Kluft, Kalenberg, Hooge Weg) are excluded on the final map. Apart from the above mentioned zonation, a larger number of canals and ditches has to be closed at least temporary. During the breeding season, the already existing alternative and less dense network of interconnected routes for boating has to be improved. Exceptions for professional access can be arranged by the actual permission system.

The side effects of recreation from concentration places and routes (parkings, embarkment and picknick sites, through traffic along canals, roads and cycle tracks) is to be watched carefully and -if necessary- some supporting provisions must be (re)located in less vulnerable parts of the reserve.

D. Concluding remarks and recommendations

Although a large area of protected sites and well-managed nature reserves is representative for the main ecosystems and landscape types occurring in that part of the Netherlands, the growing recreational pressure as a result of common social activities in a period of increasing free time is rather alarming.

The awarding of the European Diplome category A can be very helpful to establish balances with even stronger accent on conservation.

Adding the Weerribben Nature Reserve to the list of Diplome A-sites, on the other hand, may not weaken the status of this category, or offer precedents to other countries where touristic pressure causes growing concern for conservation, even in highly protected areas. A discussion on these principles and consequences must be a permanent agenda item for the group of specialists and the steering committee.

We strongly support the guiding ecological principles of the nature management in the reserve and the efforts of Staatsbosbeheer to maintain and restore priority habitats. We also congratulate the authorities, scientists and 'amateurs' for the long-term monitoring and research that have been realised and are planned for the future.

When we compare the actual situation with our experiences of twenty years ago, we note a heavily increased touristic pressure in the whole region, having its influences on the nature reserve as well. Although zoning and canalising of recreation has been established and education of the public has high priority, with offering facilities such as visitors centre and nature trails, it is to be feared that political pressure on the authorities to increase accessibility of the reserve still will increase. The status as a National Park does not fully guarantee that the balance will not be disturbed during the following decade, because of the influence of several sectors represented in the Council.

Also the agricultural changes in the surrounding landscape and the region as a whole have caused considerable changes as to water quality and quantity and the disappearance of semi-natural habitats in the direct vicinity of the reserve.

Although we are convinced that the efforts of Staatsbosbeheer are already very considerable in many aspects, some ongoing programmes could be reinforced by the Diplome, when taking into account the strength of its status. The obligation to report annually and to prepare the renewal of the Diplome by the on-the-spot appraisal is a unique system in international procedures of conservation. Therefore, some recommendations are suggested in order to facilitate the future evaluations.

In the following proposals, also some ongoing programs or efforts of SBB have been included in order to add force to the conservation strategies.

Recommendations

1. on the size and external situation of the reserve

- a) the delimitations of the different protection instruments on national and international level (physical planning; National Park, Ramsar, SPA, Diplome etc.) is to be harmonised in order to maximise conservation requirements and effects;
- b) increased efforts are needed to extend the area of the reserve by acquisition of land (private enclaves, neighbouring grounds of actual or potential interest etc.);
- c) agricultural land use in surrounding buffer zones needs to be made as compatible as possible with conservation, evolving towards sustainable integrated management;
- d) restoration of external but ecologically vital hydrological regimes (origin of less eutrophicted water, waterlevel in polder etc.) is to be improved where possible; availability of finances for permanent monitoring of water quality is essential;
- e) in the framework of the national ecological network, the connection of Weerribben and Wieden nature reserves by a large-scale nature development programme is to be encouraged as a high priority;
- f) both Staatsbosbeheer and 'Natuurmonumenten' are invited to cooperate in this regard in order to find the necessary funding and to promote the development plan (joint progress to be reported annually);

2. on the internal nature management

- a) ecological research and permanent monitoring of the management efficiency as regards the desired effects on the succession stages of vegetations, the preservation of vulnerable species or habitats etc. is to be reinforced;
- b) efforts to increase (restore) the area of the most important habitat types (notably floating low-laying peat fens, moors, species rich grasslands and hayfields) need stronger support and appropriate means (manpower, machines, finances);
- c) the evidence of choosing for the development of woodland over one third of the reserve has to be argued and possibly revised when fully taking into account the international priority for quagfen vegetations;
- d) reed cutting as an economic activity incorporated in the overall management plan remains acceptable when the balance between conservation and productivity needs is not in risk and supplementary care for areas to be mown only once in two or three years is accepted;

3. on the relations with recreation

- a) the overall recreation pressure on the reserve being quite high, the relevance of the adapted delimitation of the Diplome A zone of the reserve, excluding the most active touristic centres (De Kluft, Kalenberg, Hoogeweg) is to be evaluated during the first period of five years; the council of the National Park has to be involved in this problem, as well as provincial and local authorities;
- b) alternatives are to be worked out in order to decrease boating activities in more vulnerable parts of the reserve; this can include relocation of stopping places and (temporary) closing of several smaller canals and ditches;
- c) authorities of local and provincial level have to be convinced to reduce the increase of water recreation along the Kalenberger Gracht and other main canals where these cross the Diplome zone; especially the embarkation facilities have to be reconsidered with respect to conservation risks and needs;
- d) monitoring of the recreation impact (e.g. number of boats in the reserve, number of bird disturbances etc.) is to be encouraged (manpower and budget);
- e) further efforts of SBB are to be encouraged in order to incorporate the presence of the sparce houses in the nature reserve, attributing to these some functions that are compatible with conservation (offices, facilities for research and education);

4. Concerning the internal procedures of the Council of Europe we finally recommend that the expert invited for the on-the-spot appraisal be accompanied not only by a member of the secretariat (with knowledge on administration and legislation), but also by the consultant who is responsible for coordination and information on protected areas in Europe (database and mapping). This is especially useful during the first visit of the sites that are subject of application for the Diplome.

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