COUNCIL OF EUROPE CONSEIL DE L'EUROPE
Committee of Ministers
Comité des Ministres

Resolution CM/ResDip(2008)1
on the revised regulations for the European Diploma for Protected Areas

(Adopted by the Committee of Ministers on 20 February 2008
at the 1018th meeting of the Ministers' Deputies)[1]

Appendix 5: Model plan for annual reports

Annual report for the year 2020

Annual reports should describe the changes that have taken place since the previous year in dynamic terms of management and function and not be limited to basic data. Any new text or map introducing a change in the situation of the area should be attached to the annual report.

State: *Italy*

Name of the area: *Parco Regionale Gallipoli Cognato Piccole Dolomiti Lucane*

Year and number of years since the award or renewal of the European Diploma for Protected Areas:
2020 - 1

Central authority concerned:

Name: *Ministero dell'Ambiente e della Tutela del Territorio e del Mare*

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Authority responsible for its management:

Name: *ENTE PARCO GALLIPOLI COGNATO PICCOLE DOLOMITI LUCANE*

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[1] As amended by Resolution CM/ResDip(2014)2 on 2 July 2014 at the 1204th meeting of the Ministers' Deputies.
Internet : http://www.coe.int/cm

1. Conditions: List here all conditions which were attached to the award or the renewal of the European Diploma. Explain either how the conditions have been totally complied with or detail the progress in complying with the conditions. Please also indicate any unresolved difficulties that you have encountered.

1. the regional authorities should ensure by 2022 a substantial increase in the budget presently allocated directly to the park to enable enough means for a stable management and a long-term consolidation of what seems now to be a very efficient but vulnerable structure;

Regione Basilicata, with Regional Law n. 6/2020, has ensured an extra budget of €100.000,00 per year, in addition to the annual consolidated contribution of € 450.000,00, ensured during the past years.
This additional budget allows the Park to improve the management human resources available, so to reinforce the structure and the whole management system.

2. the regulations for the pre-park area are to be adopted by the regional government before the expiration of the first five years of the European Diploma (2025);

Contacts and meetings with the municipal administrations of the pre-park area are in progress, in order to discuss the first draft of the regulation.

2. Recommendations: List here all recommendations which were attached to the award or the renewal of the European Diploma. Explain either how the recommendations have been totally complied with or detail the progress in complying with the recommendations. Please also indicate any unresolved difficulties that you have encountered.

1. enhance the present management of the forest towards a greater natural character, with more diversity of ages of trees, as at present parts of the forest in the park are formed by trees of a similar age. It would also be advisable to leave on the ground – without removal – some trees that may have died as a result of wind or other natural or biological processes so as to favour saproxylic fauna;

*The current management plan of the Gallipoli Cognato Forest, drafted and approved in 2010/2011 expires in spring 2021. The board of the Park has already commissioned the new management plan for the period 2022/2031. The Plan, in the preliminary drafting phase, provides targeted interventions on individual forest particles aimed at obtaining a different age forest structure and to increase biodiversity with the creation of ecological islands with maintenance of dead biomass. We attach here the Preliminary Report of the new Management Plan where, at page 81, it is possible to read about this kind of interventions (attached **ID n. 01**)*

2. enhance the control of non-native trees, in particular conifers planted during the 1970s and re-forest, with indigenous trees, the relatively small areas affected;

In some areas of the forest of Gallipoli Cognato, it is possible to find portions of wood occupied by non-native trees, most of which are conifers.
*A first experimental renaturalization area, on a surface of about 4000 sqm, has been carried out on a conifer reforestation built in the 70's (see photos included, **ID N. 02**) removing the conifers and replacing them with Fraxinus both ex novo implanted and naturally reborn, together with Quercus pubescens reborn in the area after the cutting of conifers.*

*The Regional Park Gallipoli Cognato Piccole Dolomiti Lucane obtained a regional funding of € 500,000.00, split over three years, 2021-2022-2023, for the implementation of the project "Actions for the maintenance of flora biodiversity in Basilicata" in collaboration with the University of Basilicata (See attached file of the Project – **ID n. 03** - and of the Regional Official Document financing the Park **ID n. 04**).*
The project executes one of the numerous actions implemented by Basilicata Region (starting from the Natura 2000 Network Program) to apply EU and national legislation, through management tools suitable for the conservation of habitats and species present in EU sites.
The project follows the process of Conservation of flora Biodiversity in Basilicata in four thematic areas or "MACRO-ACTIONS".
1. Regulatory adaptation;
2. Research and experimentation and structures for the conservation of biodiversity;
3. Conservation actions;
4. Training, information and dissemination

Within the macro-action nr. 3, there is the activity of CONTROL OF EXOTIC AND INVASIVE FLORA SPECIES.
In Basilicata as well as in the rest of Italy, numerous reforestation interventions with alien species (mostly conifers) have been carried out in the last century with the aim of hydrogeological protection of the territory which often, properly managed, can evolve into native species woods.

These populations, that from a silvicultural point of view must be considered transitory topsoils, over the years should have been thinned out to allow the autochthonous vegetation, characteristic of the intervention areas, to reaffirm and reform a stable cover. Thinning has never been carried out and these alien species, while fulfilling its function in the first years following the planting thanks to their pioneering characteristics, now in the mature stand phase, often represent a risk for the environment.

The Regional Forest of Gallipoli-Cognato constitutes a heritage of great naturalistic interest due to the presence of different habitats, characterized by a remarkable floristic and vegetational richness. The origin of so much diversity is to be found in the variability of edaphic, climatic and geomorphological situations of the territory on which the forest area falls.
The dominant physiognomy of the forest is the deciduous mixed oak wood mainly of Quercus Cerris with the presence of Oak and Quercus Frainetto. Particularly interesting for the Gallipoli-Cognato Forest is the presence of the southern ash, Fraxinus angustifolia ssp. Oxycarpa which develops with
higher frequency at altitudes below 1,000 m a.s.l.

In stations characterized by a more xeric microclimate, Quercus pubescens grows, replacing the Turkey oak, as main tree species in association with Acer monspessulanum.
At the main hydrographic network and in the stations with the best hygrometric balance and soil fertility (gorges and deep valley incisions), lime (Tilia platiphyllos, Tilia cordata) and maples (Acer opalus, obtusatum, A. pseudoplatanus, A. lobelii, the latter endemic to southern Italy) participate in the formation of the main arboreal plan, giving rise to mixed topsoils.

Within the Gallipoli Cognato Regional Forest there are reforestations of conifers, of artificial origin, carried out over 40 years ago for the purpose of hydrogeological defence.

In the Gallipoli Cognato regional forest, the areas interested by conifers involved both surfaces without arboreal vegetation (reforestation) and parts of arboreal topsoil with a low density (coniferations). The reforestations at present are relegated to small incorporated portions in the deciduous forest where renaturalization processes are in progress.
The results of artificial implants differ from area to area and can be grouped into three types. For each of them, it is possible to carry out differentiated interventions.

Type 1 - Failed reforestation
On these surfaces, the planting has not passed the taking root phase, the areas retain the signs of soil work but are free from conifers. Longstanding, natural evolutionary processes have started, also conditioned by grazing.
Planned actions: planting of native tree and shrub species using the seed found in the Park area and/or use of young seedlings taken from more evolved populations that grow in the neighbouring areas.

Type 2 - Residual reforestation in groups
On these surfaces, the reforestation has passed the phase of engraftment and initial development, but with high mortality of seedlings. The development of conifers is different for both development and for the phytosanitary conditions, influenced by the different microclimatic and edaphic characteristics of the station.
Planned actions: cultivation measures (thinning) on the less developed units of conifers showing established native species and clearcutting on entire units of more mature conifers, to free the renewal of the hardwoods.

Type 3 - Reforestation with crashes
The reforested area has populations with different degrees of development and a coverage conditioned in growth by the absence of cultivation interventions. Conifers presents an excessive density, with erected stems, dry standing plants, presence of crashes and abundant dead biomass on the ground. The entry of broad-leaved trees is present, the renaturalization phenomenon is more
accentuated at the margin areas and in the openings caused by crashes and slashing of the stems.
Planned actions:
Option 1 - Thinning. It should be considered as preparatory action for the interventions of real renaturalization. This type will concern the densest populations, still "young" able to react to a more selective intervention, with intensity and frequency varying from case to case. With the progressive

reduction of the density, greater mechanical stability and phytosanitary action will be ensured, improving the water status of the soil, promoting structural diversity and creating favourable conditions for the settlement of native broadleaf trees.
Option 2 - "Dismantling" cuts. They must be carried out in adult reforestation where it is present a widespread renewal of indigenous hardwoods undercover, and/or where there are signs of serious phytosanitary conditions. We will proceed with the elimination of the old conifer stand, in several solutions, with thinning and clearcutting on small surfaces (strips, holes, etc.). The procedures will vary according to the geomorphological and cultural conditions, ensuring the development of the pre-existing renewal of the broad-leaved trees.

In summary, the Gallipoli Cognato regional forest is candidate to be an experimental model for the management of reforestation, for the renaturalization already underway and for the improvement of forest biodiversity through a planning that includes models easily replicable within and outside the forest context.

3. enhance the repopulation of the park with new releases of the Italian hare Lepus corsicanus. The numbers of animals so far introduced do not ensure the long-term viability of the population due to inbreeding depression caused by the founder effect;

The Park, according to the provisions of the feasibility study approved by ISPRA and the technical-scientific criteria set out in the Action Plan for the Italic Hare, has launched a program for the reintroduction of the species in different areas of the Park that are still suitable for the hare but from which it extinguished for over a decade.
In order to encourage the expansion and recovery of the taxa and avoid the dangerous phenomena of inbreeding, a reintroduction program based on the following strategies has already been launched:

- *introduction of 12-15 animals per year (M/F ratio 50%) for three consecutive years with founding individuals coming from the fauna area of the Park and endowed with a good genetic variability to be released in predetermined highly suitable areas, in order to allow to connect the natural populations currently isolated present in the Gallipoli Cognato Piccole Dolomiti Lucane Park with those of the Appennino Lucano National Park, thus ensuring a sufficient genetic exchange;*

- *constant monitoring through radiotracking techniques of the reintroduced subjects with radio collar to ascertain the percentage of survival and dispersion.*

*The first nucleus of n. 6 animals was reintroduced on 25 November 2020 (see photos **ID n. 05**) in the SAC Dolomiti area of Pietrapertosa which borders the Appennino Lucano National Park where the presence of other lepus corsicanus groups has been ascertained.*

4. monitor closely the effects of the introduction of the roe deer Capreolus capreolus italicus in the park, particularly in the forest. The low density of its only possible predators with the exception of man, the wolf, might lead to an explosion in numbers, which should be avoided;

A few years after its reintroduction, the Italicus Roe deer has been widely ascertained in all suitable areas of the protected territory of our Park.
The monitoring carried out on sample areas of the Park made it possible to ascertain that the taxa is present with not very numerous groups in the areas of original reintroduction, showing an evolution of the population in dispersal towards more external areas of the protected area, with colonization of the subjects towards new areas.
In the next years, a new monitoring campaign of the Italicus Roe deer population is expected to be launched in order to evaluate and update the evolution of the population in the Park and in the surrounding areas.

5. consider carrying out studies on the effects of climate change on the flora and fauna of the park.

Within the aforementioned project "Actions for the maintenance of flora biodiversity in Basilicata" in collaboration with the University of Basilicata, financed by Regione Basilicata, the Park is carrying on the study project "Evaluation of the vulnerability of vegetal ecosystems to climate changes in the area of Regional Park Gallipoli Cognato".

In recent decades, the vulnerability of forests has significantly increased due to increased droughts and heat waves, with thousands of reported cases of forest dieback around the world, both locally and regionally. For example, the anomalous heat wave that, in the summer of 2017, affected part of central and southern Europe, had a strong negative impact on the forests in Basilicata. Preliminary satellite surveys showed that about 100,000 hectares out of a total of 350,000, which is the wooded area in Basilicata, were characterized by a considerable state of suffering. In particular, the woods that cover the slope of the Lucanian Dolomites, between Pietrapertosa and Castelmezzano, were almost completely yellowed. These landscapes risk being completely changed with a strong negative impact also on tourism.

The main aim of the study project is to verify the impact of the 2017 climatic event, characterized by excessive heat and prolonged drought, on the forest vegetation in the Park. Specifically, it will be evaluated:
1. The vulnerability of the main forest formations.
2. The recovery capacity and resilience in response to climate disturbance.

To achieve these objectives, some forest sites representative of the different forest types will be identified within the Park. On these sites, innovative methodologies for remote and ground monitoring will be used. Specifically, remote sensing indexes (Sentinel-2) will be used to assess the impacts directly from the satellite by verifying the evolution of the signal before, during and after the climatic event. Subsequently, through ground monitoring, the main dendroecological parameters will be measured to validate and calibrate the vegetational indexes in order to assess the viability and health of the stands.

The study will allow to evaluate the vulnerability of the Park forests to climate change and to determine their capacity to react and recover in response to disturbing climatic events. Through the use of models, it will be possible to make assessment:
a) on the future succession dynamics of vegetation induced by climate change
b) on the species that will be able to adapt to the new conditions and on those destined to succumb or to be replaced by more resistant and resilient species.

3. Site Management: List here any changes to the European Diploma holding site management, in relation to both terrestrial and aquatic environments (as appropriate), and in relation to staff and finances, since the last annual report was submitted to the Council of Europe. Please also indicate any unresolved difficulties that you have encountered.

Except for the financial change indicated at point 1 of the Conditions, no changes occurred since the last information about the Park has been submitted.

4. Boundaries: Give details of any changes to the boundaries of the European Diploma holding site since the last annual report was submitted to the Council of Europe. If there are any changes, please attach an appropriate map to this report. Please also indicate any unresolved difficulties that you have encountered.

No changes on boundaries occurred since the last information about the Park has been submitted.

5. Other information: List here any other information about the European Diploma holding site which you consider should be provided to the Council of Europe.