

## An inquiry on the relationship between EUROPARC members and NATURA 2000 sites

A research developed by the European Documentation Centre on Nature Park Planning (CED PPN), DIST, Polytechnic of Turin, on behalf of EUROPARC Federation (CED PPN research group: Angioletta Voghera, Gabriella Negrini, Emma Salizzoni, Sergio Bongiovanni)

**This report fulfils the objective(s):**

***2.1.1 To gather information from EUROPARC members about their management of N2000 sites under their jurisdiction in order to provide detail into environment policy***

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**CED PPN**  
European Documentation Centre  
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## **AN INQUIRY ON THE RELATIONSHIP BETWEEN EUROPARC MEMBERS AND NATURA 2000 SITES**

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## 1. RESEARCH BACKGROUNDS AND OBJECTIVES

This inquiry has been conducted and is to be placed within the wider context of the research activity that the European Documentation Centre on Nature Park Planning (CED PPN, Polytechnic of Turin) has been carrying out since the Nineties.

The CED PPN research has nature conservation policies, with a specific focus on European Protected Areas<sup>1</sup> (PAs) policies (management and planning), at its core. More specifically, CED PPN pays a particular attention to the necessity of networking and cooperation among the different authorities responsible of nature conservation in Europe. Therefore, the relationship between PAs set up at a national/regional level and Natura 2000 Network – which represent the most important effort done at community level to conserve nature – is one of the CED PPN main research topics.

On this theme the Centre has highlighted on the occasion of several international meetings – such as the EUROPARC Conference, Pescasseroli, 2010 – that, despite the extensive spatial overlap existing between European PAs and Natura 2000 sites<sup>2</sup>, coordination between national/regional policies and community policies on the issue of nature conservation is generally weak. In this respect, a better integration would be crucial in order to fulfill an effective management of PAs and Natura 2000 sites, thus guaranteeing a continuous and effective European ecological network. This poor integration is also due to the general lack of systemic knowledge about the relationship between European PAs and Natura 2000 Sites.

This research – an inquiry on the relationship between EUROPARC members and Natura 2000 Sites – is an important, additional step towards a better knowledge about this relationship. More specifically, the research aims at identifying and assessing the connection between European PAs that are EUROPARC members (referred to as “PAsE”) and Natura 2000 sites, highlighting the spatial overlap between them and the role played by PAsE in Natura 2000 site management. PAsE are quite a representative sample of European PAs: despite the PAsE are a limited number (312), their overall extension (18.613.411 ha) represents 18%<sup>3</sup> of the total area of European PAs (102.333.075 ha)<sup>4</sup> – see Figure 1.

The research also looks at EUROPARC members that are *not* PAs (mainly governmental departments, NGOs, scientific/educational institutions, foundations – in all, 123<sup>5</sup> – referred to as “agencies”, see Figure 1), in order to highlight the overall contribution of the EUROPARC Federation members (PAsE and agencies) to the management of Natura 2000 sites.

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<sup>1</sup> “A protected area is a clearly-defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values” (Dudley, N., Ed., 2008. Guidelines for Applying Protected Area Management Categories. Gland, Switzerland, p.

8).

<sup>2</sup> CED PPN has analysed the overlap existing in Europe, with specific regard to certain European countries.

<sup>3</sup> This percentage does not change if we do not consider the extra-European PAsE (Ramat Hanadiv Memorial Gardens and Nature Park, Israel, 480 ha, State Nature Reserve Pasvik, Russia, 16.640 ha).

<sup>4</sup> Data concerning 41 European countries (data source: CDDA, by European Environment Agency, CED PPN elaboration in progress). If we consider PAsE and European PAs situated only in the 28 Countries that are members of the European Union, the cited percentage is 16% (15.178.477 ha of PAsE out of 92.779.468 ha of overall European PAs).

<sup>5</sup> For the purpose of this research, we have not considered the EUROPARC members registered as “individuals”.

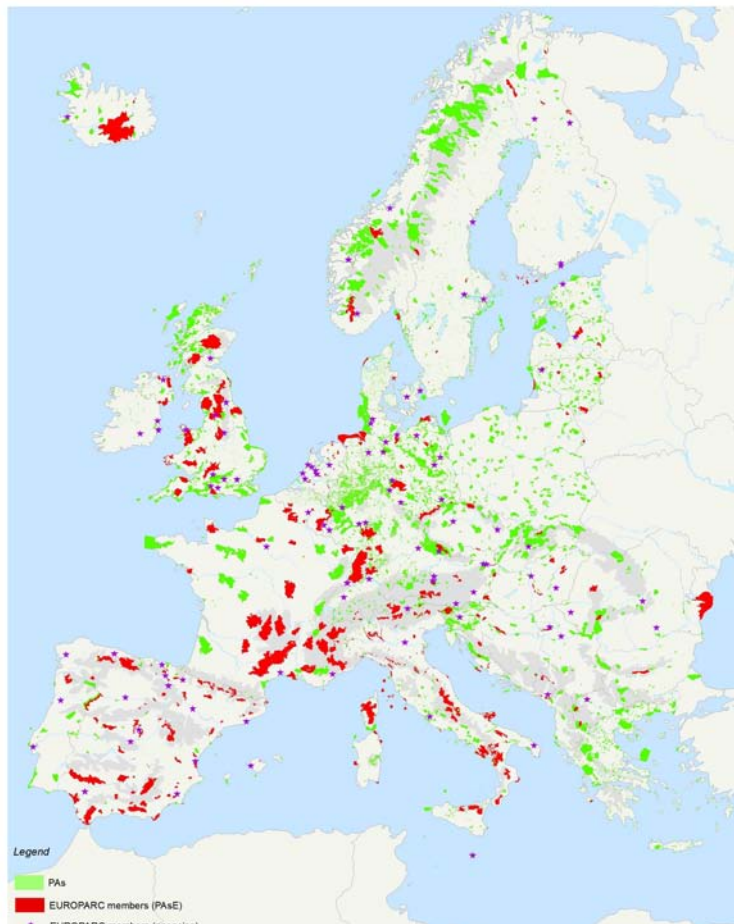


Figure 1. The EUROPARC members: PAsE (highlighted in red)<sup>6</sup> with respect to the overall European PAs (highlighted in green), and agencies (violet symbols).

## 2. RESEARCH METHODOLOGY

In order to fulfil the above mentioned objectives, the research was implemented through **two main operative phases**.

The **first phase** concerned the identification of those Natura 2000 sites that are partially or fully encompassed within **PAsE**. In order to implement this first phase, we relied on the information available on the following databases (most updated version available):

- EUROPARC member database;
- World Database on Protected Areas (WDPA, by UNEP – WCMC and IUCN);

<sup>6</sup> As far as Spanish national/regional Parks are concerned, please note that, although they actually are EUROPARC members (so they have been highlighted in red in the map), they are formally registered to EUROPARC Federation through the regional governmental agencies which are responsible for their management. Therefore, for the purpose of this research, they have not been considered as PAsE (the above cited overall extension of 18.613.411 ha is calculated without considering EUROPARC Spanish national/regional Parks, whose overall area is 3.340.960 ha) and the role of regional governmental agencies – and not that of Parks – in the management of Natura 2000 sites has been analysed (see par 3.2). More generally, please also note that PAsE are reported in the map within the limits of the available cartographic information deriving from the international databases (see par. 3.1).





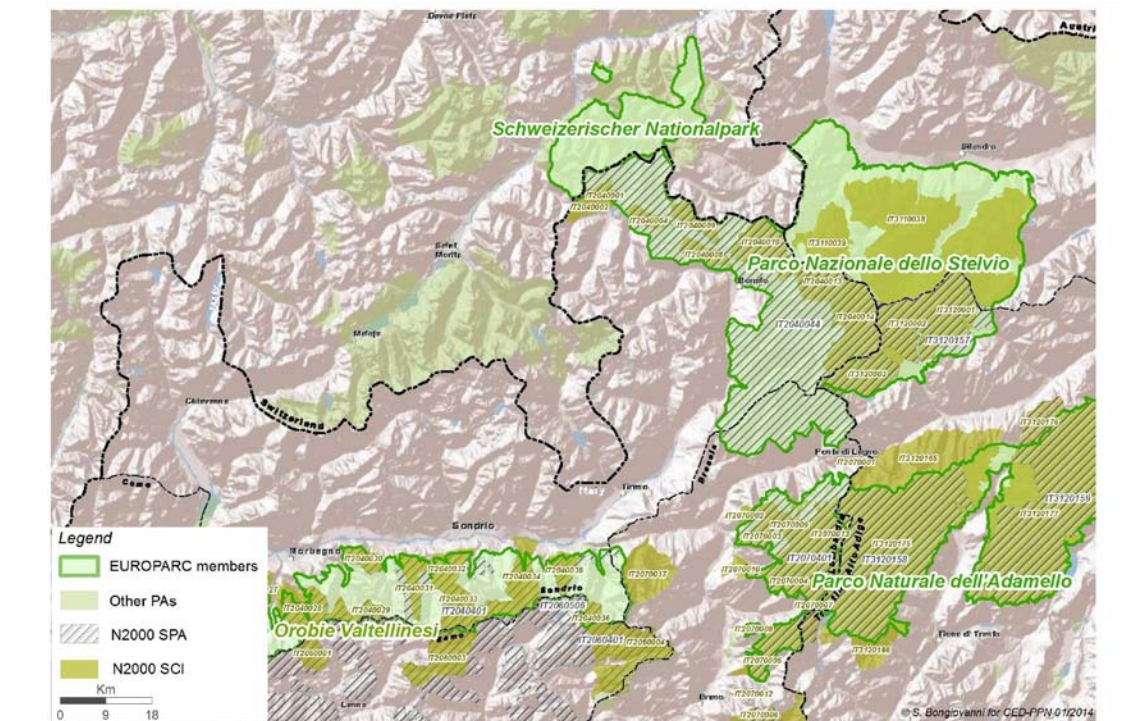


Figure 3. An example of maps produced through GIS application, identifying the spatial overlap between the PASe (*Parco Regionale Orbie Valtellinesi*, *Parco Nazionale dello Stelvio*, *Parco Naturale dell'Adamello*, *Schwaizerischer Nationalpark*) and Natura 2000 sites.

3. elaboration of the data concerning the Natura 2000 sites encompassed in the PASe (name and extension of the Natura 2000 sites, percentage of the PASe area covered by the Natura 2000 sites, body responsible for the management of the Natura 2000 sites).

The **second phase** concerned the identification of the Natura 2000 sites managed by EUROPARC members that are *not* protected areas (**agencies**). In order to implement this second phase, we relied on the information gathered by means of e-mail and/or phone calls with EUROPARC members.

The second phase was implemented through the following **steps**:

1. selection from EUROPARC member database of agencies supposedly involved in the management of Natura 2000 sites (the case list – 44 out of 123 EUROPARC agencies – was provided by EUROPARC Federation);
2. gathering of information by means of e-mail and/or phone calls with EUROPARC members;
3. elaboration of the gathered data (extension of Natura 2000 sites managed by such EUROPARC members).

### 3. RESEARCH OUTCOMES

#### 3.1 Documents delivered

In relation to the **first phase of the research**, we are delivering to the EUROPARC Federation the following documents:

1. A database (pdf file "PAsE\_SPAs\_Feb. 2014") highlighting the presence of **Special Protection Areas (SPAs) in the PAsE** and containing the following information, from column A, to column L:
  - A. international code of PAsE (from CDDA - EEA);
  - B. country international code of PAsE (from CDDA - EEA);
  - C. international name and designation of PAsE (from CDDA - EEA);
  - D. IUCN category of PAsE (from CDDA - EEA);
  - E. area (ha) of PAsE (from CDDA - EEA);
  - F. international code of SPAs (from N2000 database - EEA);
  - G. name of SPAs (from N2000 database - EEA);
  - H. type of Natura 2000 sites; **in the case of SPAs the type is always "A"** (from N2000 database - EEA);
  - I. total area (ha) of SPAs (from N2000 database - EEA);
  - J. area (ha) of SPAs situated inside PAsE (data deriving from the overlapping through GIS between PAsE areas from CDDA and Natura 2000 sites from N2000 database);
  - K. area (%) of SPAs situated inside PAsE (data deriving from the overlapping through GIS between PAsE areas from CDDA and Natura 2000 sites from N2000 database);
  - L. body responsible for the management of Natura 2000 sites (from N2000 database - EEA).
  
2. A database (pdf file "PAsE\_SCIs and SCIs + SPAs\_Feb. 2014") highlighting the presence of **Sites of Community Importance (SCIs) and sites that are classified both as SCIs and SPAs in the PAsE**, containing the following information, from column A, to column L:
  - A. international code of PAsE (from CDDA - EEA);
  - B. country international code of PAsE (from CDDA - EEA);
  - C. international name and designation of PAsE (from CDDA - EEA);
  - D. IUCN category of PAsE (from CDDA - EEA);
  - E. area (ha) of PAsE (from CDDA - EEA);
  - F. international code of SCIs and SCIs + SPAs (from N2000 database - EEA);
  - G. name of SCIs and SCIs + SPAs (from N2000 database - EEA);
  - H. type of Natura 2000 sites; **in the case of or SCIs the type is "B", in the case of SCIs + SPAs the type is "C"** (from N2000 database - EEA);
  - I. total area (ha) of SCIs and SCIs + SPAs (from N2000 database - EEA);
  - J. area (ha) of SCIs and SCIs + SPAs situated inside PAsE (data deriving from the overlapping through GIS between PAsE areas from CDDA and Natura 2000 sites from N2000 database);
  - K. area (%) of SCIs and SCIs + SPAs situated inside PAsE (data deriving from the overlapping through GIS between PAsE areas from CDDA and Natura 2000 sites from N2000 database);

- L. body responsible for the management of Natura 2000 sites (from N2000 database - EEA);
3. A database (pdf file "PAsE\_Tot. N2000 sites\_Feb. 2014") highlighting the presence of **all types (A, B, C) of Natura 2000 sites in the PAsE**, containing the following information, from column A, to column G:
- A. international code of PAsE (from CDDA - EEA);
  - B. country international code of PAsE (from CDDA - EEA);
  - C. international name and designation of PAsE (from CDDA - EEA);
  - D. IUCN category of PAsE (from CDDA - EEA);
  - E. area (ha) of PAsE (from CDDA - EEA);
  - F. PAsE area (ha) covered by Natura 2000 sites, net of overlapping between SCIs and SPAs (data deriving from the overlapping through GIS between PAsE areas from CDDA and Natura 2000 sites from N2000 database);
  - G. PAsE area (%) covered by Natura 2000 sites, net of overlapping between SCIs and SPAs (data deriving from the overlapping through GIS between PAsE areas from CDDA and Natura 2000 sites from N2000 database).

With reference to the three abovementioned databases, please note that:

- in some cases, single EUROPARC members are responsible for the management of several PAs; in this case, all the PAs managed by any such EUROPARC members have been individually considered as PAsE<sup>7</sup>;
- the extension of PAsE, as indicated in the CDDA, in some cases differs from that which is set out in the EUROPARC member database. This is both due to the underlying methodological assumptions (*i.e.* in the case of Italian protected areas, the CDDA, differently from EUROPARC member database, does not count a protected area's contiguous zones in measuring its extension) and to slight inaccuracies, by responsible authorities, in graphically reporting the protected areas' surface on GIS. Moreover, the shapes file of some PAsE are not available in the CDDA.

In order to couple with these issues, we have acted as follows: i) in relation to PAsE whose extension, as reported in the CDDA, differs from the EUROPARC member database, we have established a maximum acceptable variance between the two extensions (10%): the PAsE whose extension shows a variance below such threshold have been reported in our databases<sup>8</sup>; ii) in relation to the PAsE whose extension shows a variance above such threshold, and in relation to the PAsE whose shapes were not available in the CDDA, we referred to other data sources, such as the national/regional environmental agencies. Ultimately, we succeeded in considering 94% (293) of the overall number of PAsE (93% of the overall area of PAsE), while 19 PAsE have not been inserted in our databases (please, for a detailed list of these PAsE, see the pdf file "PAsE\_not considered\_Feb. 2014");

- the information about the body responsible for the management of the N2000 sites overlapping PAsE are reported within the limits of the information available in the N2000 database, by EEA;
- in some cases, PAsE international codes and IUCN category are missing, due to shortcomings of the source databases.





<sup>7</sup> The *Working Committee of the Nature Parcs in Baden-Württemberg* has been split in seven PAs (Geo-Naturpark Bergstraße-Odenwald, Naturparkführer Schwäbisch-Fränkischer Wald, Naturpark Stromberg-Heuchelberg, Schönbuch, Naturpark Obere Donau, Naturpark Schwarzwald Mitte/Nord, NaturparkSüdschwarzwald); the *Cuneesi natural Parks and reserves* in five PAs (Parco naturale del Marguareis, Riserva naturale Grotte di Bossea, Riserva naturale dei Ciciu del Villar, Riserva naturale delle Sorgenti del Belbo, Riserva naturale di Crava-Morozzo); the *Causeway Coast & Glens Heritage Trust* in three PAs (Antrim Coast & Glens AONB, Causeway Coast AONB, Binevenagh AONB); the *Ente Parco Regionale Riviera di Ulisse* in three PAs (Parco di Monte Orlando, Parco di Gianola e Monte di Scauri, Monumento naturale Promontorio Villa Tiberio e Costa Torre Capovento-Punta Cetarola); the *Dzukija National Park and Cepkeliai State Nature Reserve Directorate* in two PAs (Dzukija National Park, Cepkeliai State Nature Reserve); the *Public Enterprise for National Parks of Montenegro* in five PAs (Durmitor National Park, Biogradska Gora, Lovćen, Lake Skadar, Prokletije).

<sup>8</sup> However, please note that, due to this issue, the spatial overlap between Natura 2000 sites and PAsE, as emerging from GIS measurements, might slightly differ from the data contained in the EUROPARC member database.

In relation to the **second phase of the research**, we are delivering to the EUROPARC Federation the following document:

1. a database (pdf file "EUROPARC Agencies\_N2000 sites\_Feb. 2014) highlighting the relationship between EUROPARC members that are *not* protected areas (**agencies**) and **Natura 2000 sites**, containing the following information, from column A, to column K:
  - A. ID code of the agency (from EUROPARC member database);
  - B. MID code of the agency (from EUROPARC member database);
  - C. international name of the agency (from EUROPARC member database);
  - D. town of the agency (from EUROPARC member database);
  - E. country of the agency (from EUROPARC member database);
  - F. title of the person contacted to receive the information;
  - G. name of the person contacted to receive the information;
  - H. surname of the person contacted to receive the information;
  - I. tel. of the person contacted to receive the information;
  - J. e-mail of the person contacted to receive the information;
  - K. overall area of N2000 sites managed by the agency.

With reference to this database, please note that:

- should the EUROPARC member not be responsible for the management of Natura 2000 sites, this information is reported in column K;
- we marked with an asterisks (\*) members who did not return our e-mail and did not answer our phone contacts (4 out of 44 contacted members). In such cases we referred to the information available on such members' websites. Please note that inaccuracies may result from the above, especially with reference to the actual involvement of such members in the Natura 2000 sites management.

### 3.2 Data analysis and evaluation

From the above-mentioned databases we can highlight the following **main, syntethic data**:

#### PAsE

PAsE (no.)	PAsE (ha)	SPAs (type A) within PAsE (ha)	SCIs (type B) within PAsE (ha)	SCIs + SPAs (type C) within PAsE (ha)	Tot. N2000 sites (types A, B, C) within PAsE <sup>9</sup> (ha)	Tot. N2000 sites (types A, B, C) area within PAsE / tot. N2000 sites area <sup>10</sup> (%)	PAsE area covered by N2000 sites <sup>11</sup> / PAsE area (%)
292	17.177.899	4.687.118	4.161.790	931.183	9.780.091	7	37

PAsE: European Protected Areas that are EUROPARC members

SPAs: Special Protection Areas

SCIs: Sites of Community Importance

<sup>9</sup> The overall area of Natura 2000 sites within PAsE is calculated without deducing the spatial overlap between Natura 2000 sites.

<sup>10</sup> The overall area (terrestrial and marine) of Natura 2000 sites is calculated without deducing the spatial overlap between Natura 2000 sites.

<sup>11</sup> The PAsE area covered by Natura 2000 sites is calculated deducing the spatial overlap between Natura 2000 sites.

The PAsE (94% of the overall number of PAsE and 93% of their overall area, as specified above) encompass 9.780.091 ha of Natura 2000 sites (this extension is calculated without deducing the spatial overlap between Natura 2000 sites), corresponding to 7% of the total terrestrial and marine Natura 2000 sites area<sup>12</sup>. If we consider the total *terrestrial* Natura 2000 sites area only (it should be noted that only 2% of the overall number of PAsE are marine protected areas), the percentage amounts to a 10%. As a consequence, Natura 2000 sites cover 37% of the overall PAsE surface (this territorial relevance of Natura 2000 sites with respect to PAsE is calculated deducing the spatial overlap between Natura 2000 sites). If we consider the *overall area* of Natura 2000 sites overlapping PAsE (and therefore considering the overall extension of Natura 2000 sites overlapping PAsE - 15.520.084 - not only the portion of such areas encompassed in PAsE), the percentage with respect to the total terrestrial and marine Natura 2000 sites area increases from 7% to 11% (14% with respect to total *terrestrial* Natura 2000 sites area).

As far as the Natura 2000 site management is concerned, it is interesting to note that – starting from the available data from the N2000 database, concerning 42% of the total number of Natura 2000 sites overlapping PAsE (565 out of 1361) and 43% of their total area (6.668.250 ha out of 15.520.084 ha) – 56%, in terms of number (319), and 59%, in terms of surface (3.911.026 ha<sup>14</sup>), of Natura 2000 sites overlapping PAsE are managed by PAsE Authorities.

Databases db 1, 2, 3 contain more specific data concerning single PAsE and connected Natura 2000 sites.

## Agencies

Agencies responsible for the management of N2000 sites	Tot. N2000 sites managed by agencies <sup>15</sup> (ha)	Tot. N2000 sites area managed by agencies / tot. (terrestrial and marine) N2000 sites area <sup>16</sup>
31	30.398.389	21%

The EUROPARC agencies – mostly national/regional governmental agencies – are directly responsible for the management of over 30 million hectares of Natura 2000 sites (this area is calculated without deducing the spatial overlap between Natura 2000 sites), meaning 21% of the total terrestrial and marine Natura 2000 site area (27% of the total *terrestrial* Natura 2000 site area).

We also have to take into account that when members are not directly responsible for the Natura 2000 site management, in many cases they are indirectly involved in their management, e.g. working at strategic and political level for the Natura 2000 Network, or coordinating the development of management plans.

<sup>12</sup> That is 143.395.721 ha (Natura 2000 Barometer, July 2013). This extension is calculated without deducing the spatial overlap between Natura 2000 sites and without deducing the overlap between Natura 2000 categories (SCIs and SPAs).

<sup>14</sup> This extension consider the *overall area* of Natura 2000 sites overlapping PAsE: in most cases PAsE are responsible for the management of Natura 2000 site area situated both inside and outside PAsE.

<sup>15</sup> The overall area of Natura 2000 sites within PAsE is calculated without deducing the spatial overlap between Natura 2000 sites.

<sup>16</sup> The overall area (terrestrial and marine) of Natura 2000 sites is calculated without deducing the spatial overlap between Natura 2000 sites.



Database db 4 contains more specific data concerning every agency and the respective overall quota of Natura 2000 sites managed.

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On the basis of the above-mentioned data, we can note the significant role played by EUROPARC members in Natura 2000 network.

With reference to PAsE, thanks to their high average extension (58.828 ha<sup>17</sup>: it is no coincidence that PAsE are mainly Parks), and despite their low incidence in terms of number with respect to the overall set of European Protected Areas (see par. 1), they are important territorial actors in relation to the pursuing of biodiversity conservation objectives at the European level, hosting the 7% of the total terrestrial and marine Natura 2000 sites area (10% of the total terrestrial Natura 2000 sites area) and managing, at least, 4 millions ha of Natura 2000 sites.

A significant contribution to the management of Natura 2000 sites comes also from EUROPARC members that are *not* protected areas (agencies), which are directly involved in the management of over 30 million hectares of the Natura 2000 Network.

#### 4. CONSIDERATIONS ABOUT THE RESEARCH

During the implementation of the research, certain methodological issues were posed by the shortcomings of the data sources. We believe it is worth mentioning the following points in this respect:

- EUROPARC member database: the international codes of protected areas are not reported; this makes it difficult to compare the information contained in the EUROPARC member database with those contained in the international protected area databases, such as the CDDA (by EEA) and the WDPA (by UNEP – WCMC and IUCN);
- CDDA: several European Protected Areas are missing, and, in some cases, even if Protected Areas are present in the CDDA, cartographic information are missing;
- N2000 database: data concerning the management of Natura 2000 sites exist in relation to very few Natura 2000 sites.

Moreover, please note that some agencies did not return our e-mail and did not answer our phone contacts (4 out of 44 contacted members). In such cases we referred to the information available on such members' websites; some inaccuracies may result from the above.

Despite these issues, the research managed, in our opinion, to come to conclusions that are sufficiently complete and consistent with the research focus which had been posed to us. However, the research outcomes could be improved should the following step be also taken:

- ferreting out the missing PAsE cartographic information through e-mail/phone contacts with each missing PAsE, or with national/regional agencies responsible for specific protected area categories, in order to consider the overall set of PAsE; in cases of PAsE of limited extension, areas could be drawn on GIS;
- ferreting out more precise information about agencies (4 out of 44) through further e-mail/phone contacts.

<sup>17</sup> This is a relevant surface, if we consider that the average extension of European PAs is about 1200 ha [Gambino R., Talamo D., Federica T. (eds.), *Parchi d'Europa. Verso una politica europea per le aree protette*, Edizioni ETS, Pisa 2008].





Moreover, the research could be enriched through the **possible further developments**:

- analysis of the environmental features and pressures of Natura 2000 sites overlapping PAsE (on the basis of the data contained in the N2000 database);
- analysis of conservation measures (Management Plans) of Natura 2000 sites overlapping PAsE (on the basis of the data contained in the N2000 database) and their relationships with PAsE Management Plans (on the basis of a detailed inquiry developed mainly through website analysis and e-mail/phone contacts with every PAsE; considering the complexity of this step, this phase could be implemented in relation to PAsE situated in some specific European Countries).



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