## TURA 2000 ITAL

numero 8 Giugno 2015

- ISPRA study on the "Evaluation of the potential impact of pesticides on Natura 2000 sites"
- 8 Box Presentation of the Workshop on environmental assessments and integrated planning
- The conservation status of birds in Italy in 2008-2012: presentation of the Report ISPRA.
- New Natura 2000 biogeographical Process: outcome of recent Meetings
- The Winners of the 2015 Natura 2000 Awards
- 16 News







## RDPs Kick off: the Challenge to Implement the 2014-2020 **Natura 2000 Network Begins**

The European Commission has so far approved a National Programme (National Rural Network) and 5 regional Rural Development Programmes (RDPs): the new Rural Development Programme for 2014-2020 has officially kicked off in Italy. The National Rural Network, the Autonomous Province of Bolzano, and the Regional

Governments of Emilia-Romagna, scany, Umbria, and Veneto will have available to them a "plafond" of over€ 4.6 billion until 2020. The old Programme remains to be

closed: there are still a few months available to spend the remaining € 1.6 billion by December. Meanwhile, several regions have already activated new calls for proposals, marking the transition between the old and new RDPs.

The RDPs needed to account for the general goals of Europa 2020 and the rural development policy for the period 2014-2020 as embodied by the European Agricultural Fund for Rural Development (EAFRD), which pursues six strategic

Priorities 4 and 5 are exclusively environmental in nature, with a series of subpriorities (called "focus areas") of great

ecological interest (cf. issue 5 of the News-

Priority 4. Restoring, preserving, and enhancing ecosystems dependent on agriculture and forestry, particularly regarding the following aspects:

a) restoring, protecting, and enhancing

the biodiversity present in Natura 2000 sites and in other areas subject to natural or other specific restrictions and areas of High Nature Value farming and the state of European land-



scapes:

b) improving water management, including the management of fertilizers and pesticides;

c) preventing soil erosion and improving soil management;

Priority 5. Promoting resource efficiency and the shift towards a low-carbon, climate-resilient economy in the agriculture, food, and forestry sectors, particularly regarding the following

- a) increasing efficiency in water use by agriculture:
- b) increasing efficiency in energy use in

agriculture and food processing;

- c) Facilitating the supply and use of renewable sources of energy, by-products, wastes, residues and other non-food raw materials for the bioeconomy;
- d) Reducing nitrous oxide and greenhouse gas emissions from agriculture; e) Fostering carbon sequestration in agriculture and forestry;

These are highly relevant issues, and indeed regulation n. 1305/2013 on rural development establishes that for each RDP, at least 30% of the total EAFRD contribution must be earmarked for interventions for climate change mitigation and adaptation and for environmental actions, including biodiversity and Natura 2000.

The main measures concerning the Natura 2000 Network included in the RDPs are described below.

#### Non-productive investments contributing to environmental, climate and habitat protection objectives.

The measure concerns material and immaterial non-productive investments contributing the agri-climate-environmental objectives of the RDP, including the conservation of species and habitats and the enhancement of the public utility of Natura 2000 sites or other High Nature Value systems.



#### Agri-climate-environmental payments.

In continuity with the previous programming period, this is the most important measure for the sustainable management of agricultural and forest areas, including the management of agricultural areas in Natura 2000 sites and the protection of biodiversity, in light of both the actions it calls for and its wide-scale geographical coverage. Agri-climate environmental payments only compensate for those commitments that voluntarily go beyond the obligatory pre-requisites esta-

blished by the law. These commitments must be abided by for a period ranging from five to seven years. Payments are made annually to compensate, wholly or in part, for the additional costs and lost revenue arising from voluntary commitments. The total endowment for the measure for the RDPs EU 2014-2020 amounts to €15.4 billion (EAFRD). The amount for Italy is over €1 billion (10% of the total EAFRD amount), which together with the organic agriculture measure amounts to nearly €2 billion.



The agro-ecosystems (pastures, cultivated fields, managed woods) are seminatural habitats important for the conservation of many habitats and species of Community interest provided that, conducted with sustainable practices, maintain the essential natural elements such as hedges, rows, isolated trees, stone walls. Several measures of the RDP for 2014-2020 are opportunities not to be missed to implement conservation actions and to encourage the practice of agriculture with low impact.



#### Natura 2000 indemnity payments

The measure calls for specific payments to indemnify against additional costs and lost revenue from the regulations concerning the management plans and conservation measures arising from the application of the Birds and Habitats directive; the measure has been simplified compared to the past to ensure broader activation and better implementation. The total endowment for the Natura 2000 indemnity payments for RDPs EU 2014-2020 amounts to about € 505 million. Data on Italy is encouraging, thanks to a significant increase in resources earmarked compared to the 2007-2013 programme, with over €110 million in total public spending, and with 14 Regions having planned to implement this measure.

## Basic services and village renewal in rural areas.

This measure concerns in part the drafting and updating of protection and management plans for Natura 2000 sites and other High Nature Value areas. Additionally, it funds studies and investments related to the upkeep, restoration, and renovation of the natural and cultural heritage of villages, rural landscapes, and High Nature Value sites, including the socio-economic aspects of these activities, and awareness-raising activities in the environmental sphere. This

is a very important measure for the management and monitoring of Natura 2000 sites, and there are numerous excellent examples of implementation from the 2007-2013 programming period.

#### Cooperation

The measure calls for new instruments for the promotion of shared approaches to agri-climate-environmental projects and practices, including with regards to Natura 2000 sites and protected areas. The measure aims to encourage all types of cooperation between at least two subjects, and in particular joint actions for climate change mitigation and adaptation, in addition to joint approaches to ongoing environmental projects and practices, including effective water management, the use of renewable energy, and the conservation of agricultural landscapes. Activities eligible for subsidies under this measure include feasibility studies; agricultural development plans; forestry management plans; laying the groundwork for a collective land management project; running costs for cooperation; direct costs of specific projects related to the implementation of an environmental or forestry plan or a local development strategy; and costs for promotional activities. Also of note are the opportunities provided by the cooperation measures, which includes new instruments form the promotion of joint approaches to agri-climate-environmental practices and projects, including as related to Natura 2000 sites and protected areas.

As we have seen, the 2014-2020 RDPs provide a number of tools and opportunities for funding the Natura 2000 network. It will be possible to make full use of them only if they are adequately taken into consideration by the relevant management and other authorities at the national, legal, and regional levels during the drafting and implementation stages. The experience acquired during the previous programming period suggests that in order to successfully integrate biodiversity concerns into RDPs, it is necessary to achieve closer cooperation between the authorities in charge of managing the programmes and those responsible for the implementation of Natura 2000 at every level.

Building upon the lessons learned during the previous programming period, it will thus be necessary to make further, constant efforts to ensure an improved and more effective integration of Natura 2000 in the 2014-2020 rural development programme, in part through the implementation of the "Prioritized Action Frameworks" (PAFs) that almost all regions have completed (cf. News).

## ISPRA study on the

## "Evaluation of the potential impact of pesticides on Natura 2000 sites"

The Directive on the sustainable use of pesticides (2009/128/EC) calls for Member States to implement measures to reduce the risks to human health, the environment, and biodiversity arising from the use of pesticides, in particular in protected areas and Natura 2000 sites.

In these areas, the Directive establishes that measures to defend crops should reduce the use of pesticides, so as not to threaten biodiversity. Measures to reduce the use of pesticides in Natura 2000 sites and protected areas have also been established through Legislative Decree n. 150/2012 (art. 15), which transposes Directive 2009/128/EC. Article 6 of the Decree defines a national action plan for the sustainable used of pesticides (known as PAN, and published in Gazzetta Ufficiale n. 35 of 22/1/2014). The PAN establishes that "... the Ministry of the Environment, Land, and Sea; the Ministry of Agricultural, Food, and Forestry Policies; and the Ministry of Health, acting on a proposal of the Council,

and within 12 months of the entry into force of the Plan, must draft the guidelines for choosing the restrictive measures to be included in the management plans and conservation measures for Natura 2000 sites and natural protected areas, established on the basis of national law n. 394 of 6 December 1991 and relevant regional laws, in light of the following protection targets:

- a) habitats and species of Community interest tied to aquatic ecosystems;
- b) habitats and species of Community interest tied to terrestrial ecosystems;
- c) habitats in which there is a need to protect wild and domestic hymenopterans, lepidopterans, and other pollinators".

As was mentioned in the previous issue of the Newsletter, the Guidelines have now been published on schedule.

Additionally, the PAN allows regional administrations, autonomous provinces, and protected area authorities to introduce ad-

ditional limitations on the use of pesticides in order to protect endemic or endangered species. Furthermore, it recognizes that, in light of the fact that wetlands are of high conservation priority (as sanctioned at the international level by the decisions of the Conferences of the Parties of the Ramsar Convection and the Rio Convention on Biological Diversity), Ramsar sites require a higher level of protection.

Therefore, in order to build a foundation of knowledge and an integrated approach to define the appropriate conservation measures to prevent pesticide use from deteriorating the conservation status of species and habitats protected under the Birds and Habitats Directive, the Ministry has appointed ISPRA to carry out an "Evaluation of the potential impact of pesticides on Natura 2000 sites". As part of this 14-month assignment, ISPRA analyzed the potential vulnerability of Italian Natura 2000 sites to various products used as pesticides.





More than 200,000 farms conduct their activities within Natura 2000 sites of our country; the National Action Plan for the sustainable use of pesticides (PAN) provides for various measures to reduce the risks to human health, the environment and biodiversity arising from the use of such products in particular in Natura 2000 areas. An opportunity not to miss to implement virtuous agricultural practices. P. 4.

Fields sprayed with glisophate within a wetland and SPA in the Province of Rieti. P. 5 above.
National Park of the Cinque Terre; the terraces are a good agricultural practice that curbs erosion and limits the leaching of pesticides. P. 5 below. A "cereal crops steppe" cultivated with intensive practices in Latium Maremma heart of breeding range of the minor harrier in this region. P. 6. Wooded pastures inside a SPA located in central Italy, where an organic dairy farm works.

The over 2,500 Italian Natura 2000 sites were instituted to create a network of areas for the protection of natural and semi-natural habitats of community interest. Within these sites, the "Habitats" (92/43/EEC) and "Birds" (2009/147/EC) Directives call for maintaining and providing incentives for economic activities that are compatible with biodiversity conservation, partly in order to protect regional and local characteristics (art. 2.3, Habitats Directive), as long as such activities do not have a negative impact on the conservation status of the above-mentioned species and habitats.

Of all economic activities, agriculture is the one that can best integrate with the measure to protect species and habitats of community interest. Additionally, this is the economic activity for which Natura 2000 sites are most suitable; indeed, about 30% of Italy's farmland is located in Natura 2000 sites, for a total surface area of over 1 million hectares.

Additionally, over the centuries agriculture has contributed to creating numerous biodiversity-rich ecosystems, and as such their protection helps preserve a great variety of species and habitats that depend closely on farming practices. At the European level, there are 255 such species and 57 such habitats of Community interest, while Italy's network of Natura 2000 sites hosts over 200,000 working farms. As a consequence, and in order to manage farming activities compatibly with medium- and long-term biodiversity conservation, it is necessary to define adequate measures indicating the modalities through which said farming ac-

tivities must take place.

Indeed, while agricultural activities are important for the preservation of species protected under the Birds and Habitats Directives – since agricultural habitats can serve as substitutes for optimal habitats (e.g. for species typical of steppes, prairies, and wetlands) or as foraging areas (e.g. cropland, grazing meadows, orchards, etc.) – they can also become a threat to these species if they result in impoverished agricultural ecosystems (especially in hilly and lowland areas), the elimination of traditional elements of farming landscapes (hedgerows,





tree lines, ponds, and springs), water captation, and the widespread use of pesticides.

According to the Ministry of Health's database, there are 340 active ingredients that are authorized for use in pesticides in Italy, and they are used by over 4,000 commercial products with varied effects on plants and animals. These products can represent a threat to the conservation of species and habitats in Natura 2000 sites.

There is a lack of consolidated knowledge on the effects of pesticides on species and animals of Community interest or at risk of extinction. Since no toxicological tests are carried out to evaluate the impact of pesticides on such species and animals prior to authorization, it has been necessary to develop a system based on the scientific literature and a rational, reproducible approach for defining an "expert assessment".

The project called for the involvement of about 30 technicians and researchers with experience in various fields, in order to adopt a multi-disciplinary approach. The data that has been collected and processed has made it possible to create a geo-database created to allow for interaction, additions, and updates on geographical and alphanumerical information and on the available monitoring data (ecological status of water bodies, presence of pesticides, conservation status of protected species and

habitats, etc.), and to map the sites that are particularly at risk.

The ISPRA report describes the methodology used to assess the potential dangers associated with pesticide use. It is structured as follows:

- Definition of a conceptual model for assessing the potential danger arising from pesticide use in Natura 2000 sites (Ch. 1)
- Evaluation of the potential sensitivity to pesticides of species and habitats protected by the Birds and Habitats Directives (Ch. 2)
- Creation of a geo-database and definition of indicators for evaluating the pressure caused by the use of pesticides and for defining maps of Natura 2000 Sites threatened by pesticide use (Ch. 3)
- Management indications to minimize the use of pesticides that are potential harmful to the conservation of species and habitats protected under the Habitats and Birds Directives (Ch. 4)
- Conclusion and final remarks on how the project may be used and built upon (Ch. 5).

The ISPRA study established parameters to determine the sensitivity of the targets (species and habitats of Community interest) to these substances. In order to do so, it adopted a "judgment export based" approach taking into consideration information from an in-depth bibliographical search on the effects of pesticides on habitats, plants, and animals of Community interest.

At the same time the project developed, for experimental purposes only, a concise parametric index (Pe.Nat. 2000 index) that is potentially suitable for classifying Natura 2000 sites not only on the basis of their sensitivity to pesticides, but also on the basis of the environmental destination and the attenuation and/or amplification processes these substances are subject to when released in the environment.

The first goal that was achieved provides an original, concise contribution to the national context and a useful foundation of knowledge for the relevant authorities to define the measures set out in the management plans for Natura 2000 sites.

A national geo-database was built to identify the sites where agricultural activities take place and where species and habitats protected under the Birds and Habitats directive and particularly sensitive to pesticides occur. On the basis of this information, the technical and scientific assessments that were carried out led to a classification of Natura 2000 sites into several threat categories. The following concise maps for Natura 2000 sites were created:

1) distribution of the interior agricultural surface indicator, drawn from the percentage of CORINE Land Cover 3.1 classes, to which potential agricultural activities were attributed, within Natura 2000 sites (maps 1 - 2);

2) distribution of the external agricultural pressure indicator, drawn on the basis of the presence of CORINE Land Cover 3.1 classes, to which potential agricultural activities were attributed that are in contact with the perimeter of Natura 2000 sites (maps 3 – 4);

3) distribution of sensitivity classes for habitats and species of Community interest within Natura 2000 sites (maps 5, 6, 7, and 8);

4) distribution of the Pe.Nat. 2000 index (maps 9 - 10).

Maps 1 - 4 respectively highlight Natura 2000 sites that have potential internal and external agricultural pressure (along the site's perimeter), so as to identify areas where management measures must be adopted for the sustainable use of pesticides both within and outside the site, through the updating of management plans or regional conservation measures, and through the definition of agreements with the relevant land management authorities, so as to minimize the impact of pesticides that could jeopardize the conserva-

tion status of species and habitats of Community interest.

Maps 5 – 8 report the sum of sensitivity values attributed to individual species and habitats present in each Natura 2000 site. The sensitivity analysis (maps 5-8 and tables in Annex 2) shows that SCIs with wetland habitats are of the utmost priority, since these habitats host the majority of species and habitats potentially threatened by pesticides (e.g. IT2080002 Basso corso e sponde del Ticino, IT3320015 Valle del Medio Tagliamento, IT8050049 Fiume del Tanagro e Sele, IT8010030 Fiume Volturno e Calore Beneventano). Furthermore, it should be noted that low sensitivity values reported on the maps (indicated in green) are not ex-

clusively attributable to the low potential sensitivity of species and habitats, but also to the possible dominance of species and habitats that thrive in disturbed conditions. Therefore, the maps highlight the sites most at risk from pesticides (indicated in orange and red), typified by a higher number of potentially sensitive species and habitats.

The project helped simplify the identification of geographical areas and Natura 2000 sites under various levels of threats from pesticides, and indicated a series of agricultural best practices that minimize the need

Credit: Stefano Sarrocco

The Harrier Circus pygargus nests in large cereal extentions, replacement of its primary Habitats; it is one of the symbol species for which it is necessary to implement conservation measures that need agreement and cooperation of farmers (in the picture an adult male hunting).

for pesticides and/or facilitate pesticide use that is compatible with the protection of species and habitats of Community interest. These measures, which are in line with those indicated in the "Guidelines" for the implementation of the PAN, can be used to update Natura 2000 site management plans as per point A.5.8 – Conservation of Natura 2000 sites and natural protected areas of the PAN itself.

More specifically, the need to upgrade Natura 2000 management plans emerged from a preliminary screening of a sample of Natura 2000 sites selected on the basis of extensive areas potentially destined for agriculture. This screening exercise evidenced a lack of adequate conservation measures to minimi-

ze the use of pesticides and their potential impact on species and habitats of Community and conservation interest.

Nevertheless, these analyses need to be field tested as concerns the attribution of sensitivity to species and habitats, which is currently based on an "expert assessment" (albeit defined on the basis of a rational process based on our knowledge of the ecological requirements of individual species and the effects of pesticides demonstrated by studies on ecologically-similar or congeneric species).

Concerning the use of the Pe.Nat. 2000 index, the ISPRA report highlights the need for more in-depth knowledge to improve the index, especially regarding the environmental destination of pesticides in the soil, since knowledge on the interactions between chemicals and the soil biota is quite limited. Additionally, the index is currently based on the qualitative use of data on sales at the provincial level (this information has been used to define a certain number of substances potentially present in the environment), while a robust approach should be based on a pre-

cise knowledge of data on use, both in terms of substance type and application rate. For this reason, for the purposes of the management strategy for Natura 2000 sites, a new agreement with ISPRA is underway for the "Experimentation with measures established by the Guidelines for the implementation of the National Action Plan for the sustainable use of pesticides (PAN) and a risk assessment index for the sustainable use of pesticides in Natura 2000 sites and protected natural areas" (cf. Box, Newsletter Natura 2000 n°7). In other words, Natura 2000 is making steady progress!!!

The publication can be downloaded at the following link:

www.isprambiente.gov.it/files/pubblicazio ni/rapporti/R\_216\_15.pdf

#### Presentation of the workshops on environmental assessments and integrated planning.

Environmental assessment processes (Strategic Environmental Assessments and Environmental Impact Assessments) relating to the drafting and approval of management, planning, and regulatory tools for protected areas (Hydrogeological Structure Plans, Regulations, Technical Implementation Norms) and Natura 2000 sites (Management Plans and Conservation Measures), as a result of the application of Community, national, and regional norms, take on specific characteristics and highlight the need to further delve into certain procedural aspects.

The integration on planning related to protected natural areas and the Natura 2000 network is covered under Ministerial Decree of 17 October 2007 "Minimum uniform criteria for the definition of conservation measures related to Special Areas of Conservation (SACs) and Special Protection Areas (SPAs)" whose paragraph 2.2 reads: "The conservation measures established under the respective decrees designating SPAs or portions thereof falling within natural or marine protected areas of national relevance instituted pursuant to existing legislation shall be identified to integrate existing conservation measures or normative prescriptions defined by the respective existing regulatory and planning instruments".

It represents an opportunity for the various sectors and stakeholders to participate and engage in dialogue, and can be a way to share the best choices for protecting and managing highly valuable territorial entities, even though some of what is shared within this framework sometimes seems to enter into conflict with development choices.

If opportunely integrated and discussed, both the planning and

environmental assessment process are able, in light of their shared purposes (protection and conservation of environmental values, local participation and debate, opportunities for innovation, and drivers for new economic development processes, particularly with regards to the green economy), to provide synergic actions and lead to more meaningful choices concerning both sustainable development and adequate measures to protect biodiversity.

For these reasons, the General Directorate for Environmental Assessments and Authorizations of the Ministry of the Environment, Land, and Sea, together with the General Directorate for the Protection of Nature and the Sea, are currently organizing an event titled "Environmental assessment and integrated planning in protected natural areas and Natura 2000 sites".

The workshop is part of the National Operational Programme on Governance and Institutional Capacity (ESF) 2007-2013 (Line of intervention 7.B "Actions to support Strategic Environmental Assessment and Environmental Impact Assessment processes and procedures") and marks the launch of a series of activities aiming to involve local stakeholders directly, in the hope that this will help establish an operational framework that can use previous best practices to overcome difficulties in this field. In light of the relevance and centrality of the topics it deals with, this initiative will be replicated, and adapted to local conditions, in two of the four Convergence Regions to which the Programme is dedicated, in Sicily in Palermo on 8 July, 2015 and in Campania, in Salerno on 14 July. 2015.



# The conservation status of birds in Italy in 2008-2012: presentation of the Report ISPRA.

Italy's reporting activities in compliance with article 12 of the Birds Directive include the collection and analysis of data on the conservation status of birds in the country. with a particular focus on breeding species and species listed under Annex I of the Directive. At the same time, data were collected on the threats facing these species and the conservation measures that have been implemented. In compliance with Inter-Ministerial Decree 6/11/2012, ISPRA was commissioned by the Ministry of the Environment to carry out a survey, based mostly on bibliographical data, on the target species for the Report, with the collaboration of LIPU (Italian League for the Protection of Birds) and a network of regional contacts. In addition to technical staff from public institutes (regional administrations, autonomous provinces, and protected areas), experienced free-lance and amateur ornithologists were also consulted. The synergy between these subjects played an important role in obtaining up-to-date information and in achieving as realistic a picture as possible of the distribution and population status of bird species. This partly made up for the limited availability of unpublished or unverified ornithological data, which is partly attributable to the lack of effective coordination between the various monitoring initiatives currently in place in Italy.

The drafting of the Report also included several formal steps involving the approval and sharing of data on the part of Italy's Regions and Autonomous Provinces. The reporting activities ended with the sending to the European Environment Agency, through EIONET (European Environment

Information and Observation Network) of an initial, fully-compiled version of format, a revised and automatically corrected version, and a final version of the database and attached maps.

With the publication of the volume "Rapporto sull'applicazione della Direttiva 147/2009/CE in Italia: dimensione, distribuzione e trend delle popolazioni di uccelli (2008-2012)" [Report on the application of Directive 147/2009/EC in Italy: size, distribution, and trends of bird populations (2008-2012)] we are making the data we collected public, in the belief that they will be of use and interest to anyone working on biodiversity conservation – and especially bird conservation – in Italy. In order to provide as broad as possible an overview of the status of Italy's birds, we report



Several species of passerines that use agroecosystems such as trophic and breeding habitats, are in sharp decline; including the **Greater Short-toed Lark** Calandrella brachydactyla (p. 9 a male on parade), the Woodchat Shrike Lanius senator (p. 10 an adult of the subspecies badius with a juvenile) and Black-eared Wheatear Oenanthe hispanica (p. 11 an adult of the subspecies melanoleuca)

detailed information on each species included in the Report. At the same time, we describe the methodology used for collecting the data and inserting it into the standard database provided by the European Commission, in order to provide a framework for interpreting the data itself. Finally, we analyze some of the data to help identify trends and define possible conservation actions. The data and maps for the National Report art. 12 Birds Directive are available on the relevant webpage of the Central Data Repository of the EEA, while full information on reporting pursuant to art. 12 is available on the European Commission's website.

The volume is the first assessment of the conservation status of Italy's birds in accordance with the dispositions of the Birds Directive, and is part of the reporting activities required by the Commission every 6 years. The volume examined 306 populations of 277 species of birds (including 11 non-native species). In addition to breeding populations, it examined 33 wintering populations (especially waterbirds) and 4 populations of migratory raptors, in light of their conserva-

tion importance and the existence of longterm monitoring programmes.

#### Breeding birds.

More than 50% of breeding populations showed an increase or decrease of more than 10% in the short term (2000-2012), and over 60% of populations showed this in the long term (1984-2012). Short-term trends could not be determined for about 30% of populations, dropping to 21% for long-term trends. If we only consider populations listed under Annex I, data was lacking for 41 out of 90 populations concerning short-term trends, and 15 out of 90 populations concerning long-term trends.

Various species that are decreasing in the long term are also showing declines in the short term, including 11 species of passerines: Savi's Warbler, Great Reed Warbler, Fieldfare, Bearded Reedling, Penduline Tit, Black-eared Wheatear, Greater Short-toed Lark, Garden Warbler, Woodchat Shrike, and Sedge Warbler; the last two species are showing the steepest declines. Non-passerines that have been experiencing strong declines include Egyptian Vulture (80-90% in

the long term), along with Pochard, Little Tern, Wryneck, Night Heron, and Corn Crake.

The group with the largest relative increases includes many species that nest in wetlands, among which several are listed in Annex I. These include a number of Charadriiforms (Slender-billed and Mediterranean Gulls, Sandwich and Gull-billed Terns, Eurasian Oystercatcher, Collared Pratincole, and Black-tailed Godwit), several long-legged waders (European Spoonbill, Grey Heron, White Stork, Greater Flamingo, and Sacred Ibis), in addition to Common Shelduck, Mute Swan, Cormorant, Great Crested Grebe (in the long term), Pigmy Cormorant, and Goosander (a recent colonist). Raptors that are increasing significantly include Griffon Vulture and, especially in the long term, Lesser Kestrel, Marsh Harrier, and Red Kite. Woodpigeons have increased significantly, especially in the last 10-15 years. Among passerines, two non-native species showed particularly significant increases: Red-billed Leiothrix (in the short term) and Red Avadavat (in the long term).





In relation to population size and available trends, we infer that in both the short term and long term, the largest net increase in breeding pairs concerned Blackbird, Blackcap, Robin, European Starling, and Blue Tit, while the biggest losses involved House Martin, Greenfinch, Skylark, Stonechat, Goldfinch, Tree Sparrow, and Italian Sparrow.

Among non-passerines, the largest absolute increases concerned: Eurasian Collared Dove, Woodpigeon, Great Spotted Woodpecker, Green Woodpecker, and in the long term, Yellow-legged Gull and Grey Heron. Populations of Cuckoo, Wryneck, and Little Owl (in the short term) seem to have lost the largest number of breeding pairs.

Most threatened species were positively affected by the protection of wetlands after the institution of the Natura 2000 Network. While intensive agriculture was the dominant land use type, the increase in tree cover arising from the abandonment of traditional agricultural practices had a positive effect in providing additional cover, nesting sites, and ecological corridors.

Although Italian lowland areas proved to be among the most species-poor environ-

ments, they do host some of the most important 'hot spots' for bird conservation, namely inland and coastal wetlands. Nevertheless, many populations of wetland birds, especially passerines, declined, perhaps due to poorer habitat quality caused by pollution, lack of management, seawater infiltration, and avian diseases. Many bird populations associated with farmland habitats diminished, probably due to the increasing intensification of agriculture in lowland areas, and the abandonment of traditional agricultural practices and free-range livestock farming in hilly and mountainous areas.

Agri-environment measures still provide wide margins for improving the agricultural landscape and providing better habitat for birds, but their application has been very spotty so far.

Species characteristic of forests or ecotones are showing significant population increases, often coupled with breeding range expansions. These positive trends are probably caused by a change in forest structure brought about by a shift in management practices towards conservation, especially in protected areas, but also by the widespread increase in plant cover caused by

the abandonment of farmland. Some species, especially trans-Saharan migrants, are probably already being affected by largescale environmental changes, such as climate change, agricultural intensification, and the degradation of wetlands in Africa. An analysis of the data shows that the Birds Directive was partly successful in fighting biodiversity loss in Italy. The survival of most species of conservation interest seems to be influenced by human impacts on habitats. Therefore, conservation strategies must be targeted principally towards habitat protection and management. Special Protection Areas (SPAs) should be the sites of choice in which conservation strategies should be tested experimentally in order to produce guidelines that can then be applied at the national level. Broadly speaking, improving the conservation of Italy's birds can only come about through a more in-depth knowledge of their ecology, demography, and distribution. Major efforts should be pursued to strengthen the coordination of all bird monitoring projects throughout the country and to support the improvement of the National Biodiversity Network.

#### Wintering species

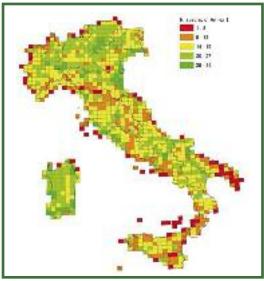
On the basis of IWC data, most of the lar-

gest wintering populations of waterbirds seem to be increasing. In the short term (2000-2009), 20 of the 33 wintering populations examined in the Report are increasing, 4 are stable, 4 are fluctuating, and 5 are decreasing. Of the latter, Pochard, Black-necked Grebe, and Red-breasted Merganser showed the steepest declines. The largest increases concern Pigmy Cormorant, Greylag Goose, and Common Shelduck.

In the long term (1991-2009), 23 wintering populations (70%) show increases, which are particularly significant in Pigmy Cormorant, Greater White-fronted Goose, Greylag Goose, Sanderling, and Great White Egret. Of interest is the increase in population for several game species, including Coot, Mallard, Teal, and Wigeon. Declining species include Little Stint, Common Goldeneye, and Pochard (for the latter, the decline in absolute terms – namely the number of wintering individuals – is particularly significant).

#### Breeding range trends

Many more species seem to have undergone range expansions rather than contractions, both in the short term (42% versus 11%) and the long term (57% versus 8%). This also holds true for Annex I species, yet 15 out of 90 breeding populations (16%) showed a contraction of over 20% in the short term, and 12 out of 90 in the long term. It should be noted that these range expansions are likely, at least in part, to reflect the failure to update the breeding range of many Italian species, in the absence



Species richness of birds under Annex I of the Directive, calculated as the cumulative number of species / cell. The richest areas are the wetlands of the Po Valley, the upper Adriatic, the Tyrrhenian coast and Sardinia, as well as the alpine and foothill valleys, and the interior of the central-southern Apennines and interior of Sardinia. The cells with the lowest number of priority species are especially widespread in Puglia and in the smaller islands where all the colonies of a limited number of marine species are concentrated. Source: Report ISPRA

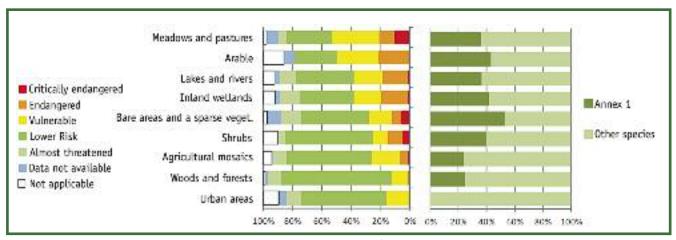
of a recent breeding bird atlas and due to the lack of data collected systematically throughout Italy. The picture that emerges is therefore likely to be more optimistic that the actual situation. The group of species undergoing strong range contractions in the short term includes several endangered (White-winged Tern, Savi's Warbler) and critically endangered species (Barred Warbler, Bonelli's Eagle, and Sedge Warbler). The largest long-term range contractions concern Black Tern, Savi's Warbler (endangered), Barred Warbler, Sedge Warbler, and Egyptian Vulture (critically en-

dangered).

Numerous wetland species appear among those with the largest range expansions, while some (Cattle Egret, Great White Egret, European Spoonbill, Pigmy Cormorant, Red-billed Leiothrix) are also among those experiencing the highest population increases. On the other hand, Savi's Warbler and Barred Warbler are the only species with significant range contractions that are also experiencing significant population declines.

By the same token, significant long term range expansion is coupled with significant population increases in Cormorant, Common Shelduck, Mute Swan, Grey Heron, and Oystercatcher, while major population decreases in Grey Partridge, Sedge Warbler, Egyptian Vulture, Savi's Warbler, and Barred Warbler also led to significant range contractions.

We produced a cumulative map of long term range variation for Annex I species, in order to highlight any effects related to the application of the Directive. The map shows a general increase in the number of Annex I species, especially in several areas of southern Italy, but also in Sardinia, Umbria, Marche, Emilia-Romagna and Trentino. Although not immune to errors caused by the uneven distribution of available spatial information, the map appears to reflect a more complete knowledge of the situation compared to the past and a real increase in the ranges of many protected species, including widespread ones.



Percentuale delle diverse categorie di rischio di estinzione delle specie di uccelli nidificanti incluse nella Lista Rossa, associate a diversi macro-habitat.

La percentuale più elevata delle specie maggiormente minacciate (vulnerabili, in pericolo e in pericolo critico) è associata ai macro-habitat

dei prati-pascoli, dei seminativi e delle zone umide. Fonte: Report ISPRA

#### The role of SPAs

The Natura 2000 Network is of strategic importance for the conservation of vulnerable species: SPAs host over 50% of the national population for at least 54 of the 90 breeding species listed under Annex I. Additionally, SPAs largely overlap with the areas that host the highest diversities of Annex I species: many were instituted to protect important wetlands, especially along the coast and in Italy's largest lowland plains. Additionally, a significant number of SPAs are located along the Apennines and Alps and protect some of their main ranges, which host a number of rare species associated with forest and rocky habitats. Taken together, Italy's 610 SPAs appear to help link major breeding sites and to facilitate the expansion of protected species into new areas. Additionally, they cover a total surface area of 44,075 square kilometres, a significant percentage (14.6%) of the national territory. Most SPAs are located in the Mediterranean (40.2%) and Continental (40.3%) biogeographical regions. In terms of surface area, the largest percentage of protected land is found in the Mediterranean region (53.5%), followed by the Alpine (32.5%) and Continental (14.0%) regions.

The percentage of land area included in SPAs is relatively uniform in the various regions (an average of 15.8%), although it is slightly higher in Abruzzo, Latium, Veneto, Trentino-Alto Adige, Val d'Aosta and Calabria, given that SPAs there often overlap with large national and regional parks located in mountainous areas. Indeed, Abruzzo and Calabria - together with Apulia - have the largest average surface areas for SPAs, although their absolute numbers are low. On the other hand, the percentage of protected land in Tuscany and Emilia-Romagna is rather low, and fragmented into a high number of SPAs (Emilia-Romagna holds the record with 87): in these regions, SPAs mostly protect wetlands and reclaimed sites, which are generally small and reflect the high degree of anthropization of these two regions. Umbria and Liguria are the two regions with the smallest percentage of protected land (respectively 5.6% and 3.6%). Concerning the value of SPAs for the protection of biodiversity and bird populations listed in the Birds Directive, it should be noted that a majority of standard data forms (71.5%) report less than 20 species listed under Annex I (38.2% report less than 10 species), while only 8.9% report over 40 species. SPAs that are above this threshold are exclusively wetland areas, and are concentrated in Emilia-Romagna (12), Tuscany and Sicily (7), Friuli-Venezia Giulia (5), Sardinia (4), Veneto and Apulia (2). The highest average number of Annex I species per SPA is found in Friuli-Venezia Giulia, which probably reflects the positive correlation between latitude and species richness, and the region's geographical location, which makes it suitable for bird species typical of central Europe, the Balkans, and the Mediterranean.

The publication can be downloaded at the following link:

http://www.isprambiente.gov.it/it/pubbli cazioni/rapporti/rapporto-sull2019appli cazione-della-direttiva-147-2009-ce-in-italia-dimensione-distribuzione-e-trend-delle-popolazioni-di-uccelli-2008-2012



#### NEW NATURA 2000 BIOGEOGRAPHICAL PROCESS: OUTCOME OF RECENT MEETINGS

The "new Natura 2000 Biogeographical Process" was launched in 2012 by the European Commission in order to support member states with the coherent management of the Natura 2000 network while identifying and tackling goals and priorities, facilitating and strengthening cooperation, synergy, and the exchange of experiences and best practices. The new biogeographical process thus aims to actively contribute to the achievement of a favourable conservation status (FCS) for habitats and species of community interest.

The process's planned milestones include a series of meetings organized at the biogeographical level with the participation of a number of stakeholders. These meetings are organized and hosted, on a voluntary basis, by a member state or region and co-organized with the support of the European Commission.

## "Alpine Grassland Monitoring and Assessment" workshop, Feltre (Belluno) 20-22 May 2015.

During the Alpine seminar in Graz, Austria (25-26 November 2013), participants in the "Grasslands" working group identified some management shortcomings that were tackled in more detail during the "Alpine Grassland Monitoring and Assessment" workshop organized by the Veneto region and the European Commission from 20 to 22 May, 2015. The workshop delved into a series of key topics:

- Analysis of the current status of Alpine grasslands through an assessment of their conservation status based on reporting pursuant to article 17;
- Discussion and debate on the definition of favourable reference values (FRV) and favourable conservation status (FCS) in the various member states, in order to identify shared aspects and differences in their approaches;
- Identification of possible techniques to be jointly applied to Alpine grasslands for the monitoring and reporting activities pursuant to article 17 of the Habitats Directive on the part of the subjects involved, in order to obtain comparable results.

The workshop highlighted how primary Alpine grasslands enjoy a positive conservation status, while secondary grasslands are experiencing negative trends across the board. The stronger pressures come from grazing, natural plant succession dynamics, and unregulated cutting. ISPRA presented its proposals for the methodologies to be used for habitat monitoring, which methodologies shall contribute in the future to the 4th report pursuant to article 17 of the Habitats Directive.

Next, the workshop presented Alpine grassland monitoring experiences in several Member States (Italy, Czech Republic, France, Germany, Poland, Spain, and Sweden). Finally, four different theme-based sessions aimed to generate ideas and solutions for the monitoring and assessment of Alpine grasslands.

## "Marine" biogeographical seminar, 5-7 May 2015 Saint Malo (France).

Together with France, Italy is concentrating its efforts on identifying offshore Natura 2000 sites (beyond 12 nautical miles from shore). Indeed, during the first marine biogeographical seminar held in June 2010, the European Commission deemed satisfactory the identification of Natura 2000 sites in territorial waters, while stressing the need

to go well beyond 12 nautical miles to identify sites that would successfully protect the habitat of community interest "Reefs – 1170", seabirds, the Loggerhead Sea Turtle, and the Bottlenose Dolphin. Italy is planning the following activities:

**Phase 1**: identification, on the basis of scientific data, of the main areas of open seas that are important for the conservation of marine habitats (reefs – 1170) and species, and for which new Natura 2000 sites need to be identified;

**Phase 2**: drafting of proposals for Natura 2000 sites within these main areas on the basis of:

- Scientific identification of an initial proposal for Natura 2000 sites;
- Identification on the part of ISPRA, together with the Ministry of the Environment, of an initial proposal for conservation measures to be applied to SPAs and SCIs, adopted in conformity with the Common Fisheries Policy:
  - Negotiation of conservation measures and sites at the national and regional levels and with the relevant stakeholders:
  - Negotiations with France to define coherent shared proposals.

**Phase 3**: improvement of the proposal to identify each Natura 2000 site through:

- Identification of the managing authority for off-shore Natura 2000 sites;
- Final consultations and communication to the European Commission of proposed offshore Natura 2000 sites by the end of 2016.

Phase 4: identification, on the part of the managing authority, of the conservation measures for the new marine Natura 2000 sites, and transmission of these measures to the Ministry for the drafting of the decrees instituting the SPAs.

In light of the available data for the macro-areas identified by ISPRA and discussions with the French, it emerges that for Bottlenose Dolphins and seabirds the identification of offshore SPAs and SCIs should represent an extension of corresponding sites within the 12 miles.



The first identification of the offshore macro-areas within which, following a consultation process with the stakeholders, the SPAs to protect colonies of seabirds will be delimited. *Source*: Ministry of the Environment, Land and Sea

#### Continental Biogeographical Region Kick-off Seminar – 29 June 2015 Luxembourg.

The Continental Biogeographical Region Kick-off Seminar took place on 29 June, 2015 in Luxembourg. A delegation from Italy took part. The seminar aimed to:

- Tackle practical habitat management questions by identifying important priorities in a shared manner;
- Take stock of the conservation status of specific priority habitats and establish the necessary actions to improve, maintain, or restore habitat conditions in Natura 2000 sites;
- Share experiences, acquiring knowledge, and achieve consensus on priority management actions for specific habitat types;
- Implement specific, agreed-upon cooperative activities aiming to restore habitats or maintain their favourable conservation status;
- Network and share experiences to achieve even better management results, and to continue to build know-how on the most effective ways to achieve the best results for protecting and managing habitats and species of conservation interest.

#### HERE ARE THE WINNERS OF THE 2015 NATURA 2000 AWARDS

The six winners of the Natura 2000 Awards for 2015 were announced in Brussels on 21 May 2015. The winning projects come from Denmark, Germany, Spain, and France, in addition to a cross-border project involving six countries along the Danube River.

Winners were selected for each of the five categories: communication, conservation, socio-economic benefits, reconciling interests/perceptions, and cross-border cooperation and networking. Additionally, the project that received the most votes from European citizens (over 25,000 people took part in the voting) was also announced. The results are below.

#### **Conservation**

#### Project: "Blue Reef - Restoration of Stone Reefs in Kattegat", Denmark

The "Blue Reef" restored about five hectares of a particularly rich rocky marine habitat (cavernous boulder reefs) within the Læsø Trindel Natura 2000 site in the heart of Denmark's Kattegat Sea.

The goal was to re-create, in a stable fashion, this rocky marine habitat, which features steep slopes and deep cracks, in order to restore the areas closest to the surface. The project, carried out by the Danish Nature Agency in collaboration with the University of Aarhus and DTU Aqua, saw the use of over 100,000 boulders and proved a great success. In less than four years, total biomass increased by six- to eight-fold for each square meter of sea bed, the population of certain key species of fish such as cod and hake increased threefold, and the project's ecological benefits are destined to increase in the coming years.

http://naturstyrelsen.dk/naturbeskyttelse/naturprojekter/bluereef/

#### **Communication**

Project: "Long Live Life! Biodiversity meets Communities", Germany

In order to improve awareness on the importance of the Natura 2000 Network in Germany, Naturfreunde carried out two ad-hoc campaigns between 2010 and 2014. The first campaign created a network of 40 carefully-selected nature trails in Baden-Wuttemberg and designed to allow local communities to get to know the natural history "treasures" just outside their front door. The second campaign saw the staging of the "Es lebe das Leben" exhibition as a showcase of the Natura 2000 Network in Europe and in Baden-Wuttemberg. The exhibition was staged in various public locations in several cities, and saw the participation of the main local stakeholders and authorities. Additionally, the project promoted a series of "Natura 2000" days in various sites, with hikes, bicycle rides, and canoe trips.

#### **Reconciling interests/perceptions**

Project: "Favourable Social Environments for Bear Conservation", Spain

The Cantabrian Mountains host one of the last viable Brown Bear populations in Spain. For many years "Fundacion Oso Pardo - (FOP)" has worked with local stakeholders to reduce human-bear conflict in the region. Agreements were signed with Spanish and Cantabrian hunters' associations to reconcile hunting with bear conservation; these agreements involved over 4,500 hunters and affected over 280,000 hectares of bear habitat. Park rangers and hunters worked together to reduce poaching and monitor the bear population. Additionally, FOP delivered over 1,400 electric fences to hunters, bee-keepers, and livestock farmers to prevent damage to wildlife and domestic animals. As a result of these and other awareness-raising activities, the local communities and hunters are now proud to live beside the bears, and bear deaths attributable to humans have been drastically reduced. The population of Brown Bears in Cantabria has grown from 70 to 230 in recent years. In this case, living side-by-side harmoniously was the key to conservation.

http://www.fundacionosopardo.org

#### **Socio-economic benefits**

Project: "Vultures: Providing Gains for Natura and Communities", France

The "Gorges du Tarn et de la Jonte" Natura 2000 site in southern France hosts numerous threatened species, including Griffon and Egyptian Vultures. Starting in 2008, the Lozère Hunters' Association has promoted actions to support livestock farming and tourism based on this natural resource.

The association involved local farmers in keeping mountain meadows open through sheep grazing and set up feeding stations for vultures, which was also an economically efficient way for livestock farmers to dispose of animal carcasses. Vultures became a "brand" for the Lozère areas. There are over 600 lodging facilities for tourists in the area, and over 35,000 people visited the vulture visitor's centre last year. A local beer even named itself after the vultures (La Feuve). This is an excellent example of how conservation and economic development can work hand-in-hand.

http://gorgestarnjonte.n2000.fr/

#### **Cross-border cooperation and networking**

Project: "DanubeParks – Bridging Natura 2000 Sites Along the Danube River Habitat Corridor", nine countries along the Danube

The Danube, which flows through 10 nations, is the world's most international river. Its varied habitats form the backbone for biodiversity in south-eastern Europe. The project involved the managers of all protected areas and the over 30 Natura 2000 sites along the Danube to systematically tackle shared challenges on a large scale, through cross-border strategies and task forces. Starting in 2009, over 150 actions were carried out along the river corridor, with a focus on habitat management, the conservation of flagship species, river restoration, nature-based tourism, and awareness-raising. DanubeParks has become an example of a successful integrated approach that has brought together conservation aspects with those related to river transport, forest management, and tourism. The enormous interest generated by the project's festivals, events, and publications greatly increased public attention towards Natura 2000 sites.

http://www.danubeparks.org

#### **European citizens' award**

Project: "Natura 2000 Day", Spain

In order to improve awareness on the importance of the Natura 2000 Network, SEO/BirdLife and BirdLife Europe launched 'European Natura 2000 day', as part of the Life+ Project "Natura 2000: Connecting people with biodiversity" in collaboration with Agencia EFE. Anyone interested in participating in the initiative was asked to make a symbolic gesture by making a butterfly shape with their hands, to show their support for nature conservation actions. Each year, this event is dedicated to the conservation of a Natura 2000 site in Europe. In 2014 it was Donana's turn, a vast area of marshes, dunes, oak groves, pine woods, and matorral in southern Spain that hosts thousands of species, including Spanish Imperial Eagle and Iberian Lynx. Since the campaign began in 2013, over 19,000 people followed the various events throughout Europe, with over 3 million contacts on social networks

http://www.natura2000day.eu



#### Final conference of the Life + Project "Fa.re.na.it"

The final conference of the Life+ Project "fa.re.na.it – Fare Rete per Natura 2000 in Italia" took place in Rome on May 20, 2015 in the Sala Dalla Vedova of the Società Geografica Italiana. The project's slogan was "my land is worth it". The event, in which about 70 people took part, described the project's results, with a particular focus on the communication strategies to be implemented to communicate effectively with the agricultural world regarding issues related to biodiversity and good management practices for Natura 2000 sites that can be pursued through rural development funds. The projects involved over 700 farmers in 37 seminars, but it also targeted public administrations, involving about 900 regional and local representatives.

#### **PAF Update**

Between 2013 and 2015, seventeen regions/autonomous provinces sent to the European Commission their "Prioritized Action Framework (PAF)" documents, in which they identify and describe, for the period 2014-2020, their priority interventions for the protection of habitats and species, and plan, through an integrated approach, the type and entity of the funding necessary to achieve this (cf. n°5 Newsletter Natura 2000): Abruzzo, Liguria, Molise, and Sicily have yet to send in theirs.



## Three events where Nature takes centre stage.

## International conference: Giving nature value – Ecosystem services to "feed the planet" – 12 June 2015.

The conference, promoted by the Italian Ministry for Agricultural, Food, and Forestry Policies (MIPAAF), provided an opportunity to present the LIFE+ Project "MGN (Making Good Natura)", carried out by a large number of partners and led by the University Consortium for Socio-economic Research and the Environment (CUR-SA) and co-financed by MIPAAF and the Ministry for the Environment, Land, and Sea. It is the first Italian project to develop new environmental governance approaches aiming to protect agricultural and forest ecosystem and to define biophysical, quantitative, and qualitative assessment of the ecosystem services provided by Natura 2000 sites. The LIFE MGN project aims to attribute an economic value to the services provided by ecosystems, with the goal of "accounting" for nature and preventing the gradual loss of these benefits, by providing public administrations and protected area managers with management tools and solutions and self-funding instruments that can help remunerate nature protection: Payments for Ecosystem Services (PES). The goal of the conference was to provide the tools for a discussion on how to maximize the value of our natural heritage with regards to the core theme of the universal exposition: "Feeding the Planet, Energy for Life".

## Conference: Biodiversity: natural capital, the basis for the new economy – 4 July 2015.

This conference, promoted by the Ministry for the Environment, Land, and Sea (MATTM) in collaboration with Federparchi and WWF Italia, focuses on ecosystems and the services they provide

every day and free of charge to human well-being. These services are the cornerstone of economic processes and of the development and wealth of human societies. Natural capital cannot thus be 'invisible' for economic models, as is currently the case, but it must be considered central for human development. It is thus necessary to identify the ways in which we can 'account' for nature and give it value. This value cannot be measured exclusively in monetary terms, because the structures, processes, functions, and services of ecosystems go well beyond any mere economic or monetary accounting. The National Biodiversity Strategy promoted by the MATTM and approved in 2010 to comply with the United Nations Convention on Biological Diversity lays out its vision as follows: "Biodiversity and ecosystem services, our natural capital, are preserved, valued, and whenever possible restored due to their intrinsic value and so that they may continue to provide long-term support for economic prosperity and human well-being in spite of the profound ongoing changes at the global and local levels".

### Conference/Debate: The IUCN's Green List approach – 4 July 2015

This conference/debate promoted by MATTM with the collaboration of Federparchi aims to raise awareness on the IUCN's "Green List" approach as a tool to assess the effectiveness of biodiversity conservation access, its application, and its future outlook in Europe and worldwide. According to IUCN, the time has come for protected areas to step up and take on a leading role in local land management. In order to do so, however, protected areas must meet high management standards in terms of efficacy and the involvement of local communities. These standards were set – a process in which Italy participated actively together with nine other countries from all five continents - through the "Green List" approach, a veritable quality certificate.

#### NATURA 2000 ITALIA INFORMA

**EDITORIAL TEAM:** 

Maria Carmela Giarratano, Laura Pettiti Contributors to this Issue:

Pierangela Angelini, Enrico Calvario, Laura Casella, Eugenio Duprè, Susanna D'Antoni, Emanuela Perinelli, Luigi Servadei

### THIS NEWSLETTER IS AVAILABLE IN ITALIAN AND IN ENGLISH.

and in the website of the Ministry of Environment and Territorial Protection at http://www.minambiente.it/home\_it/menu.html?mp=/menu/menu\_attivita/&m=Rete\_Natura\_2000.html|Documenti\_di\_riferimento.html

Reproduction is authorized, except for commercial purposes, provided the source is acknowledged.

GRAPHIC DESIGN: Sagp srl, Roma

**Printing:** June 2015