Ministry for the Environment, Land and Sea

ITALY'S FIFTH NATIONAL REPORT TO THE CONVENTION ON BIOLOGICAL DIVERSITY

(2009-2013)

United Nations Decade on Biodiversity

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ACRONYMS

CT: Consultation Table

DPNM: Nature Protection Directorate

EEA: Environmental Effects Assessment

EIA: Environmental Impact Assessment

EU: European Union

FLEGT: Forest Law Enforcement, Governance and Trade

ISPRA: National Institute for Environmental Protection and Research

MATTM: Ministry for the Environment Land and Sea

NBC: National Biodiversity Committee

NBO: National Biodiversity Observatory

NBS: National Biodiversity Strategy

PAs: Protected Areas

PCTP: Provincial Coordination Territorial Plan

SACs: Special Areas of Conservation

SCIs: Sites of Community Importance

SEA: Strategic Environmental Assessment

SPAs: Special Protection Areas

THE EXECUTIVE SUMMARY

The period covered by the fifth report CBD (2009-2013) is particularly rich and meaningful to the definition of new objectives and actions that are projected from the global level to the regional (EU) and national levels.

In fact, in 2010, "International Year of Biodiversity", was adopted by the COP X the Strategic Plan 2011-2020 with the 20 Aichi Targets and the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization.

Italy has faced this time of change with great commitment and consistent with international processes, approving the National Biodiversity Strategy 2011-2020 (NBS) result of a shared and participated process.

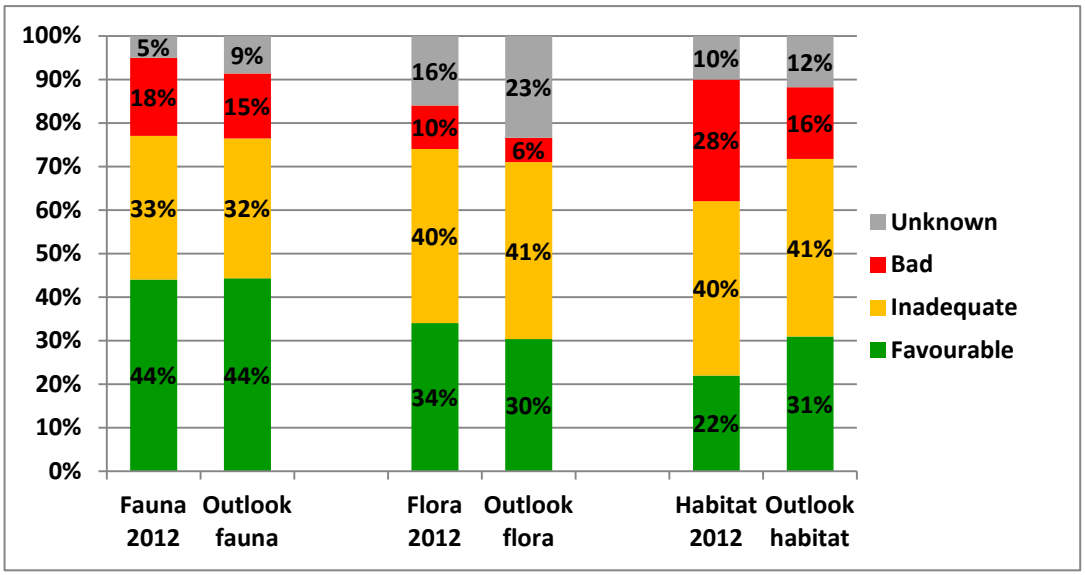
Importance of biodiversity

Italy is probably the most bio diverse country in Europe. On all species in Europe, about 30% of animal and 50% of plants are present in Italy, on a surface that just represent 1/30 of the whole continent.

Taking into account that Italy has a highly human modified territory, biodiversity and the ecosystem services it provides are at the same time threatened by human activities and represent a great resource for human activities and wellbeing.

Key changes in the status and trends of biodiversity

Both red lists either assessments of conservation status of species and habitats protected under European Union Directives show a complex picture with many species and habitats at risk, but also positive or improved situations.



Species and habitats: status and outlook (from 3rd Report Habitat Directive).

Data also show the central role of the protected area system in conserving biodiversity, covering more than 21% of the Italian territory and more than 19% of territorial waters.

The protected territory (national system of protected areas, Natura 2000 Network sites, Ramsar sites) showed a slight increase, and is higher than requested by the Aichy Target 11.

PAs system with Natura 2000 addition: land and sea coverage/total land and national territorial waters.

	ha	%
Italy's land surface	30130244	100,0
Surface of Land Protected Area	6523072	**21,6**
Italy's territorial waters surface	15436412	100,0
Surface of territorial waters included in protected areas	2951271	**19,1**

Main direct and indirect threats to biodiversity and ecosystems

In analyzing indicators and outcome of the 3rd Report for Habitat Directive, anthropic threats are stable in number and trends, and they are expected to stand in a short and medium term.

Impacts are mainly generated by ecosystem changes due to humane activities (pollution of surface runoff, habitat fragmentation, use of biocides hormones and chemical products), together with forestry and agriculture not properly managed, abandonment of pastoral activities, leading to reduction of semi-natural habitats, to urbanizations and anthropic disturbance. Anthropic disturbance is the main threat to habitats of Union interest, together with the building of infrastructures, alien species and change in ecosystems; moreover intentional fires have high impact on some habitats.

For marine species, fisheries rank first among threats, followed by pollution, anthropic disturbance and change of ecosystems. For marine habitats the impact of pollution rank first, followed by change in ecosystems, anthropic disturbance, fisheries, transport and change in coastal and littoral habitats.

Introduction of invasive alien species should also be considered, being responsible for local extinction, in particular for fish and decapods, and being a potential major threat in a near future.

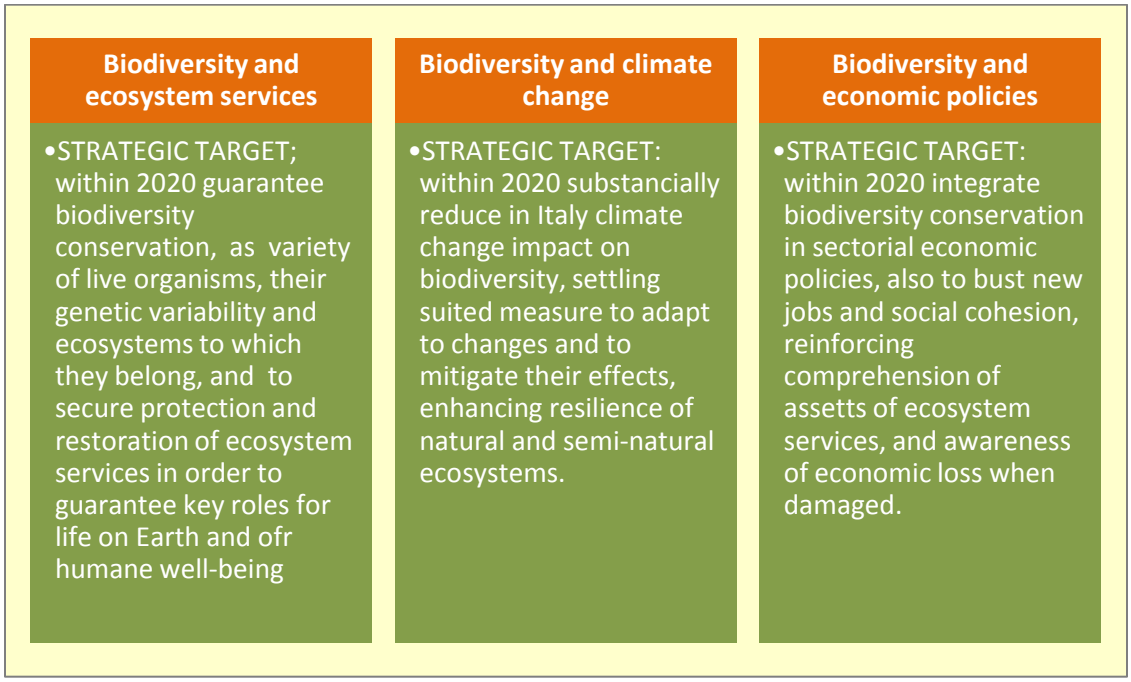
National Biodiversity Strategy

Italy adopted on October 2010 the National Biodiversity Strategy (NBS), as a reference document in order to stick to commitments accepted with the ratification of the Convention on Biological Diversity.

NBS aims to merge and integrate biodiversity conservation targets and sustainable use of natural resources within sectorial policies, and as a consequence the implementation

of the vision of the Strategy itself: “Biodiversity and ecosystem services, our natural capital, are valued, preserved and where possible restored, for their intrinsic value and in order to underpin economic prosperity and humane well-being in spite of deep changes occurring at local and global level”.

In order to implement it, Strategy has been organized in three main pillars, linked likewise with strategic targets.



Pillars of NBS.

In order to reach this targets, 15 working areas have been identified: 1. Species, habitat and landscape; 2. Protected areas; 3. Genetic resources; 4. Agriculture; 5. Forests; 6. Inland water; 7. Marine environment; 8. Infrastructures and transportation; 9. Urban areas; 10. Health; 11. Energy; 12. Tourism; 13. Research and innovation; 14. Education, information, communication and participation; 15. Italy and global biodiversity.

Threats, main targets to tackle and intervention priorities are indentified within all working areas.

NBS implementation is in line with EU policies dealing with biodiversity, and with European Union Biodiversity Strategy, whose targets are also consistent with Aichi Biodiversity targets. Hence a good match between the three strategies.

The governance of the Strategy is guaranteed by a Committee composed of representatives of all Ministries and Regions, supported by an Observatory of technical-scientific experts and a Consultation Table with all the stakeholders.

The Strategy covers the period from 2011 to 2020. In 2015, there will be a in-depth assessment and review of the Strategy.

A report on the implementation of the strategy will be issued every two years; analyzing the progress towards the achievement of strategic objectives and specific goals in all work areas.

In the First Report, regarding the period 2011-2012, the main actions, results and assessment of SNB implementation were described.

There is good perception of the impact of human activities on biodiversity and the ecosystem services it delivers, on the other hand there is increasing awareness regarding the importance and value of biodiversity, and the strategic need to preserve it, see for example the theme of Expo 2015, “Feeding the planet, energy for life”.

This resulted in the decision to act in synergy between the various sectorial policies to ensure that the natural capital is preserved and used in a sustainable manner to contribute to human welfare.

The flexibility of NBS, and the assessment of the first two years of activity (2011-2012), has allowed to identify critical issues to overcome and to enlarge the number of involved parties.

The institutions are activating positive partnerships with social partners, enterprises, universities and research institutes, with the aim to build on the positive experiences of protected areas and the opportunities of the Green Economy.

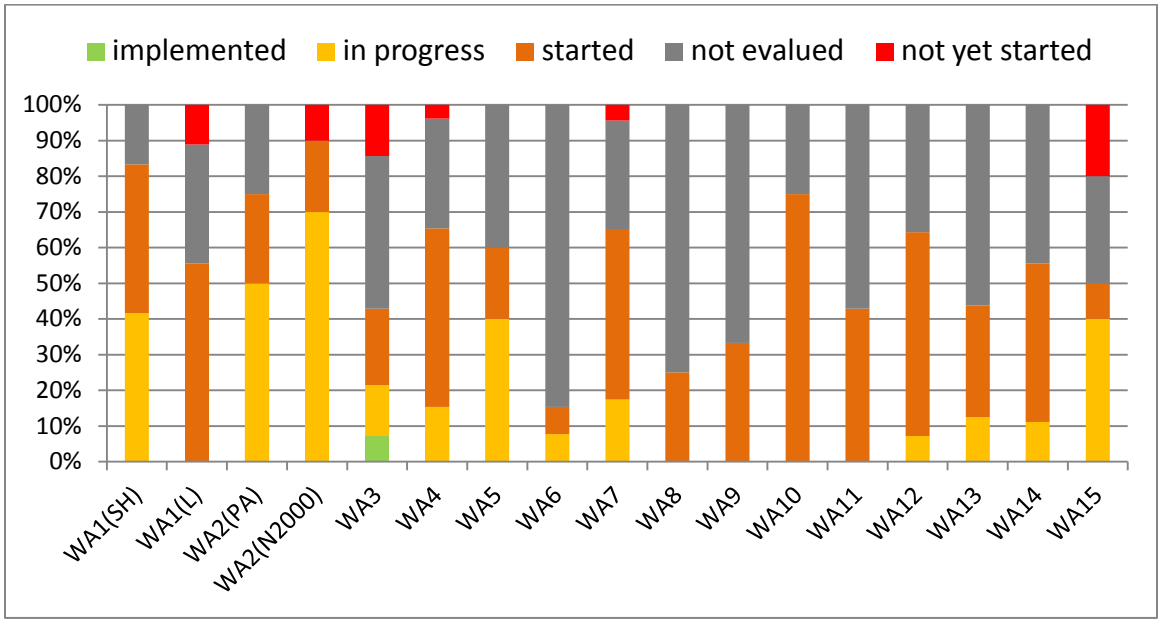
A contribution to this came also by the National Conference on "The Nature of Italy. Biodiversity and Protected Areas Green Economy for the revival of the country" held in Rome in December 2013. The Conference and the preparatory workshops and activities focused on:

- Protected Areas and Natura 2000 network as a means to combine conservation and economic development.
- The scientific research for the conservation and enhancement of natural capital.
- Green jobs, youth employment and new entrepreneurship: the role of training in developing innovative skills in support of the green economy and development of territories.
- The green infrastructure and ecosystem services in Italy as a tool for environmental policies and green economy: potential, problems and proposals.

Implementation of National Biodiversity Strategy and progress towards Aichy target

A global picture on implementing status of National Biodiversity Strategy turns out mainly from the First Report for period 2011-2012.

In Figure below a synthesis on implementing status of National Strategy is recorded. Concerning 15 working areas implementing status has been ranked going from green to red.



Implementation of priorities in 15 working areas of NSB: Synthesis of evaluation. WA: Working area; 1 SH: Species and habitats; 1L Landscape; 2PA: Protected areas; 2N2000: Natura 2000; 3: Genetic resources; 4: Agriculture; 5: Forests; 6: Inland waters; 7: Marine environment; 8: Infrastructures and transports; 9: Urban areas; 10: Health; 11: Energy; 12: Tourism; 13: Research and innovation; 14: Education, communication, public awareness and participation; 15: Italy and biodiversity in the world.

The analysis of results shows that biodiversity conservation needs to be further integrated into sectorial policies. To date there are several guidelines but to obtain concrete conservation results these should be translated into policy actions. Indeed several local experiences have been successfully completed.

Hence the need to strengthen information swap and increase efforts in defining systemic actions that would allow to have more efficient, consistent and coordinated guidelines and implementation performed by Central Administration, Regions and local Administrations.

In this framework Italy is strongly committed to the implementation of the Strategic Plan and is making significant progress to achieve all Aichi targets, with encouraging results as:

- Interministerial activity for national strategy for resource mobilization for biodiversity.
- Protected areas system is actually really wide-ranging. For the time being our engagement is directed in increase managing efficiency, with the aim to maximize biodiversity conservation, including ecosystem services.
- Create operational databases and dedicated portals; these are tools that make possible to steer policies, provide up to date figures in environmental assessment procedures, enhance and spread knowledge, and increase level of awareness on biodiversity. In this respect the portal Naturaitalia is identified as

National biodiversity Clearing House Mechanism that will play a pivotal role in the exchange of information among different sectors that contribute to the conservation and sustainable use of biodiversity in Italy.

- A significant contribution to mainstreaming comes from the governance system of the National Strategy for Biodiversity, that aims to enhance cross-cutting approach, widening opportunities and procedures of spreading and communicating about significant initiatives on-going in our country.

PART I: AN UPDATE ON BIODIVERSITY STATUS, TRENDS, AND THREATS AND IMPLICATIONS FOR HUMAN WELL BEING

Q1: WHY IS BIODIVERSITY IMPORTANT FOR YOUR COUNTRY?

Italy is probably the most bio diverse country in Europe. This condition is mainly due to geography, morphology and pedology, with a territory spanning from Alps and boreo-alpine environment, to temperate woodland, to Mediterranean scrubs, and to extreme and sub-desert condition in some of southern archipelagos. History has also shaped environment, and numbers of endemics is relevant. Moreover Italy is the core of the Mediterranean Basin, one of world's 33 biodiversity hotspot.

On all species in Europe, about 30% of animal and 50% of plants are present in Italy, on a surface that just represent 1/30 of the whole continent.

Taking into account that Italy has a highly modified territory, biodiversity and ecosystem services provided by it are both threatened by human activities and represent the added value of such activities.

Protected Areas

In Italy, the system of Protected Areas (Pas) now covers 1,748 municipalities (22% of Italian municipalities) of which 68% with less than 5,000 inhabitants; 283 mountain communities (79% of the total); 98 provinces (95% of the total) and all regions. The only national parks involving 462 municipalities, 82 mountain communities, 39 provinces and 18 regions.
The Italian experience has innovative features as regards its ability to meet the parks with the territorial specificities and for this to become the tools of conservation parks and at the same time local development.

Pas, either at national and regional level, play a pivotal role in protecting precious environment and species, but also in raise awareness among people, creating direct and indirect employment (Table 1).

PAs are now being visited for leisure and/or for specific interests by an increasing number of people. In this respect dedicated initiatives conducted by public schools together with those managing protected areas have produced synergies that allow new generations to become familiar with concepts as biodiversity, endangered species, ecosystem balance, etc. It is worth to note that recent economic crisis has impacted less on tourism in PAs than in other place devoted to tourism.

Table 1. Employements, direct and indirect, generated by PAs system. Source: Federparchi on ISTAT data., 2011.

Direct employment: PAs employed	Employed
Local Administrations (Regional PAs)	6.143
National Parks	756
Surveillance in national parks (State Forestry Corps)	828
Total employed	**7727**
Closely linked employments	**Employed**
Services: employed in 1,242 companies providing services in environment, culture and tradition in Communes included in National Parks (2950 Communes)	5.874
Tourism: employed in 17,411 accommodation facilities and in 7,720 catering facilities in PAs	48.912
Agriculture and trade in PAs (953 companies and farms to produce and trade agricultural products produced in PAs):	2766
Total employed	**57.552**
Wider linked employements	**Employed**
Employed outside PAs with clear linkage to products and services within PAs	**16350**
General total	**81629**

Green economy

Occupation and new jobs are increasingly becoming relevant, not only in agriculture, fisheries, forestry, and nature tourism, but also in fields like production of energy generated by alternative sources.

To date in whole Italian economy (both public and private), “green” employed – or so called green jobs – are more than 3 million. Beside other 3 million and 700000 are those triggered by green economy. Without considering agriculture, 328,000 companies in Italy, with more than one employed, will invest in 2014 in green technologies in order to save energy and to mitigate environmental impacts, representing about 22% of national companies. This should generate 38% of new jobs anticipated (216,500 on a total of 563,400)(Fondazione Symbola - Unioncamere, 2013).

Agriculture

Another peculiarity of Italy is found in its food culture and legacies; in this respect more and more people is involved in agricultural and farming activities where old and

traditional plant and animal varieties, kicked out from the productive system in recent years, have been “rescued” from the oblivion. New ways to produce food is now furthering the sustainability of the production itself, dimming the impact on the environment, supplying better quality food, and last but not least, improving life condition for farmed animals. Furthermore traditional agriculture and farming activities normally avoid to use large areas for monoculture, differentiate plants and land use, allowing the persistence of marginal areas and ecotones, enhancing preservation of biodiversity, and providing necessary connection between areas serving as dispersal corridors. The use of pesticides tends to be reduced, and the promotion of local market at 0km favors the consumption of local and seasonal food, limiting the use of fossil fuels for distribution and energy use for greenhouses.

The World Expo "Feeding the Planet, Energy for Life", to be held in Milan in 2015, has as its main theme the sustainable agricultural production and the particularity of local production, with the aim of promoting a different way of producing and consuming food.

Q2: WHAT MAJOR CHANGES HAVE TAKEN PLACE IN THE STATUS AND TRENDS OF BIODIVERSITY IN YOUR COUNTRY?

To secure consistency with IV CBD Report, analysis of status and trends of biodiversity, and related threats, has been conducted using the same indicators set, and adding state indicators of National Biodiversity Strategy (NBS) (see Part II), partially overlapping (Table 18).

The Table 18 shows a snapshot of the parameters measured by various indicators in the period between the fourth and fifth Report. In the case of the NBS status indicators that do not correspond with those used for the Fourth Report the trend may also refer to a longer period.

Concerning Natura 2000, results contained in 3rd Report have been used (drafted according to art. 17 in Habitat Directive for period 2007-2013 (http://cdr.eionet.europa.eu/it/eu/art17/envupyjhw) and Report drafted according to art. 12 in Birds Directive, for period 2008-2013 (http://cdr.eionet.europa.eu/it/eu/art12/envurl48a).

Both updating of red lists either assessments of conservation status of species and habitats in 3rd Report show a complex picture with many species and habitats at risk, but also positive or improved situations (Figure 3, Figure 4, Figure 5, Figure 6).

Data also show the pivotal role of Protected Areas system in biodiversity conservation, including about 70% of land of Ecological Value medium, high or very high. Altogether protected areas at various levels are slightly increasing, at an higher level of what required in Aichi Target 11 (including National Protected Areas, Ramsar sites and Natura 200 sites).

A synthetic description for used indicators is reported below.

Forested areas: status and trends

Italian forested area went till now through a gradual and constant increase, spanning from 8,765,000 ha in 1985 to 10,987,805 ha in 2013, with an increase of 26.7%. This has been confirmed in recent years (Figure 1), and is partially linked to forestation activities, and in more importantly to natural forest colonization of abandoned agricultural land in hilly and mountainous areas.

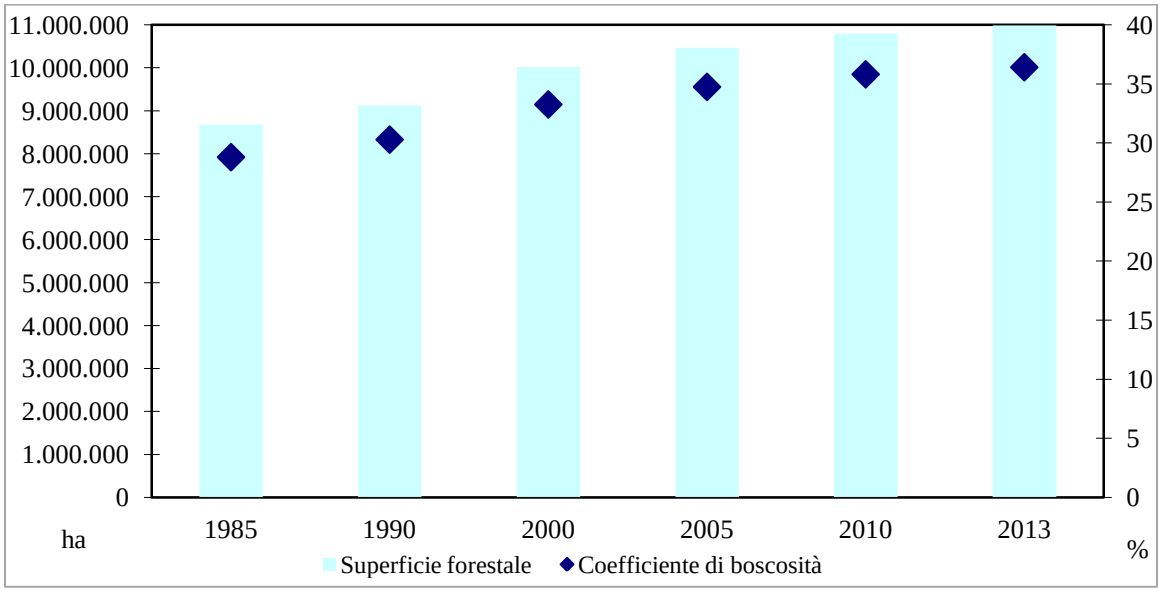


Figure 1. Variation in forested areas and in forestry coefficient (1985-2013).

Ecological value of the territory according to "Carta della Natura"

"Ecological value" is an indicator worked out within "Carta della Natura" at 1:50,000 scale. In ten Regions surveyed for the time being the "Ecological Value" is medium, high or very high in Natural Protected Areas system, with a surface totaling about 70%.

On the contrary surveys on Ecological Value distribution outside PAs show that parcels at medium high or very high Ecologcial Value vary from low percentages (for Lazio, Molise,Puglia, Veneto) to medium (around 50% in Friuli Venezia Giulia, Sardegna and Valle d'Aosta). An analysis of these data can pride useful advice in order to reconsider already existing PAs and eventually to pinpoint new ones.

PREI (Posidonia Rapid Easy Index) – CW

The PREI is a multimetric index based on univariate statistics. It is based on five different describers of *Posidonia oceanica* beds surveyed: density of beds, leaves surface/stem; epiphytic biomass and leaves biomass ratio, the depth of the lower limit and the type of the limit.

From the extent of deviation from a given baseline (Environmemtal Qaulity Ratio, EQR) PREI index bring back information in “ecological status” of water body, and the inclusion in one the 5 status categories: “high”, “good”, “average”, “insufficient”, “bad”.

In Figure 2 the ecological status of Italian coastal waters has been represented. Major values of EQR, for high Ecological status, has been mostly detected in Marine Protected Areas, or in area with a low humane activities, as coastal areas in Sardinia.

Figure 2. Provisional ranking of ecological status for coastal waters in Italy using EQB for Angiospermae (PREI Index).

Size and level of threat of animal species

Italian fauna comprises more than 58,000 species, with about 55,000 invertebrates and 1,812 Protozoa (98% of species), and 1,258 Vertebrates species (2%). Recent studies on certain groups of insects, suggest that the number of animal species that are part of the

Italian fauna should be increased by at least 15%, bringing the number of species reported in Italy to more than 65,000.

ISPRA Database on Ungulates show a positive trend for many species, with Abbruzzi's chamois increasing by 72,3% between 2000 and 2005.

Among 672 vertebrates species, assessed in recent "IUCN Red List of Italian Vertebrates" (Rondinini *et al.,* 2013), of 576 terrestrial species and 96 marine species, 6 result extinct in recent times. It has been calculated that about 31% of Italian vertebrates is threatened, with about 50% of least concern (Figure 3).

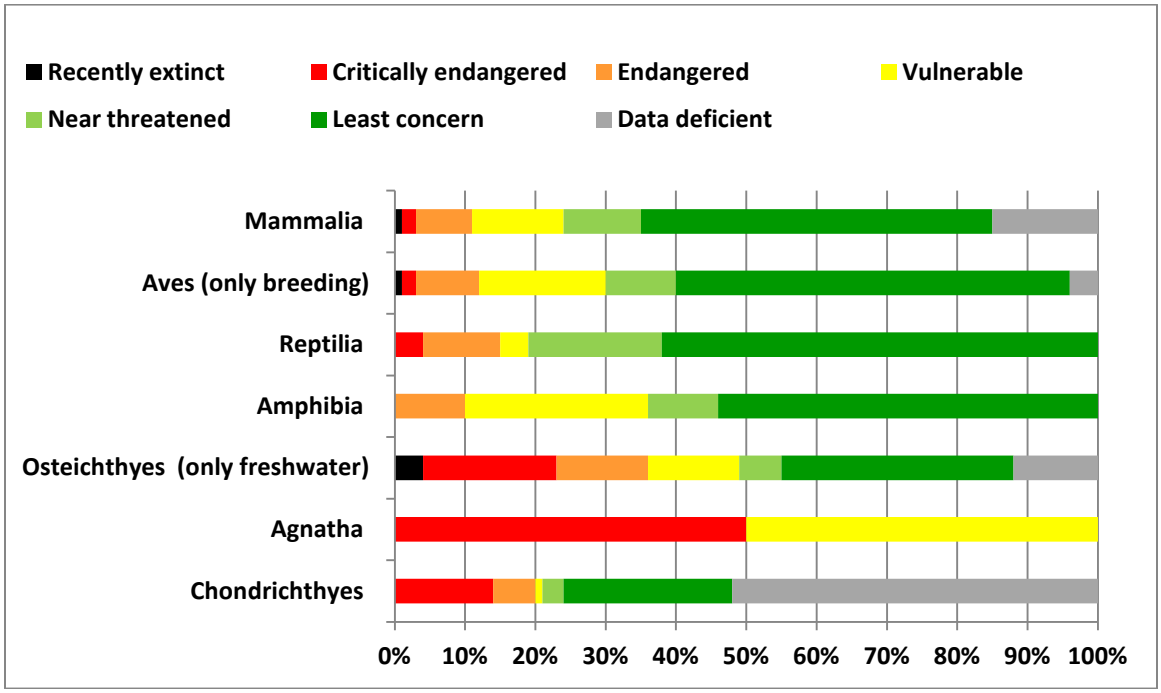


Figure 3. Percentages of threat categories for Italian vertebrates.

Size and level of threat of plant species

Bryological flora in Italy are among the richest in species in Europe with 1,156 species of which 292 liverworths and 864 mosses. Furthermore Italy, with 2,328 *taxa* surveyed, may be included among the European countries with highest lichen diversity. Vascular plants numbers 6,711 species, with 144 Pteridophyta, 39 species of Gymnosperms and 6,528 Angiospermes.

Overall 42% of "policy species" (IUCN Red List of Italian Flora. Policy and other threatened species) (protected according to Bern Convention and Habitat Directive) are threatened at various level, more or less in line with what is reported on the Red List of the Vascular Plants of the European Union of 27 Member States (Bilz *et al.* 2011); while for 24% data are insufficient to make a proper assessment (comprising mostly mosses) (Rossi *et al.*, 2013.).

Table 2. Threat categories for Italian Flora (modified from Rossi *et al*., 2013).

Categoria *Red List* IUCN	Vascular plants	Briophytes	Lichens	Fungi
Estinta (EX)	2	0	0	0
Estinta a livello regionale (RE)	1	0	0	0
Estinta in natura (EW)	1	0	0	0
Probabilmente estinta CR (PE)	11	4	0	0
Probabilmente estinta in natura CR (PEW)	1	0	0	0
Gravemente minacciata (CR)	96	10	4	3
Minacciata (EN)	76	11	8	5
Vulnerabile (VU)	22	0	7	2
Quasi a rischio (NT)	31	3	0	1
A minor Rischio (LC)	40	0	4	0
Dati insufficienti (DD)	16	33	2	2
Totale	**297**	**61**	**25**	**13**

Natura 2000: results of reporting activities

3rd National Report (Genovesi *et al*., 2014), drafted according to art.17 of Habitat Directive, which refers to years 2007-2012, has been realized with a collaboration between Ministry of the Environment, Regions and Autonomous Provinces, ISPRA, Scientific and Academic Organizations, and single experts.

This is the base for un updated and robust knowledge, useful to direct and orient management, and to prioritize more urgent conservation measures.

In 3rd Report 113 plant species, 225 animal species and 132 habitats have been reported, totaling 802 synthetic sheets for three terrestrial biogeographical regions and for marine region. Results depict lights and shadows.

Conservation status seems bad for about 50% of species of European Union (EU) interest, and for more than half of habitats (68%). This percentage are mirrored in future perspectives for their conservation (Figure 4, Figure 5,Figure 6).

Most critical conditions for plant species (number of *taxa* in unfavorable conditions) are in Mediterranean Biogeographic Region; 14 species are in a bad conservation status (7 in the Mediterranean region, 5 in Continental Region and 1 in Alpine region); moreover one species (*Marsilea quadrifolia*) is sharply declining either in the Mediterranean and Continental Regions.

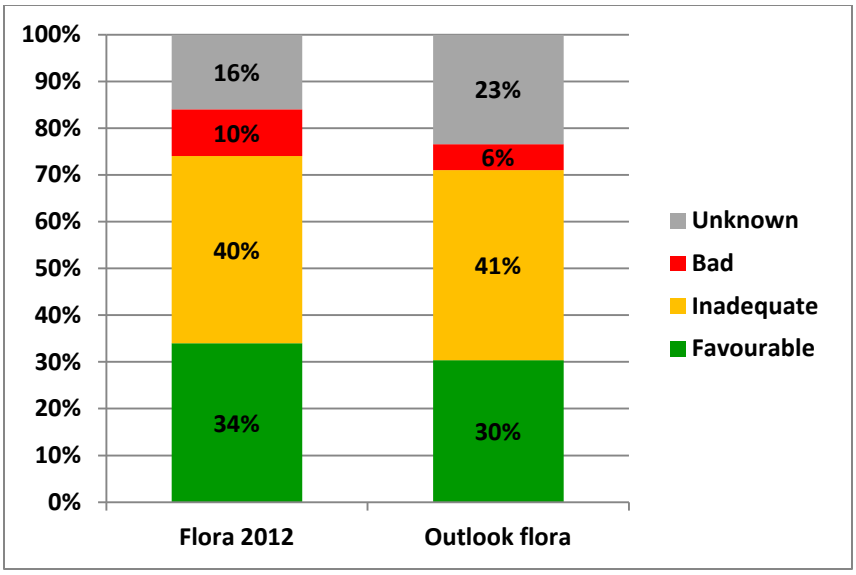


Figure 4. Species of Flora: status and outlook (from 3rd Report Habitat Directive).

Even conservation status of animal species (except Birds) of EU interest shows significant problems; 18% is in a bad conservation status, and 15% has a negative outlook (Figure 5).

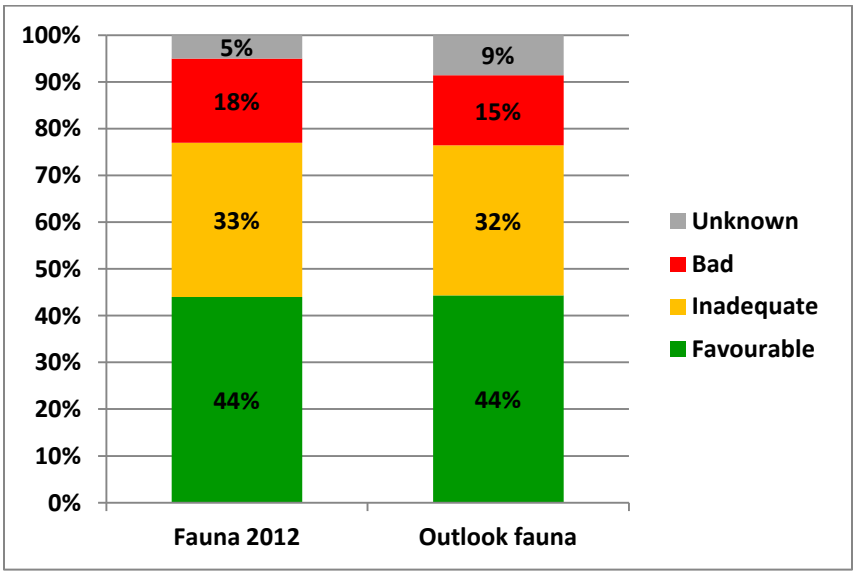


Figure 5. Species of Fauna: status and outlook (from 3rd Report Habitat Directive).

Concerning habitats, overall picture rank 27% in bad conservation status and 40% with an inadequate conservation status (Figure 6).

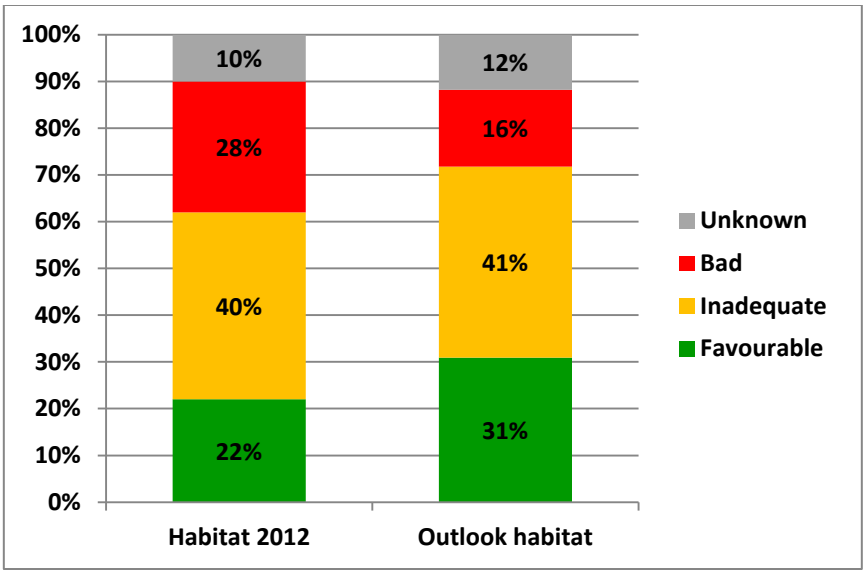


Figure 6. Habitat: status and outlook (from 3rd Report Habitat Directive).

Future perspectives for species and habitats, that actually match with overall conservation status, are linked to persistence of threats and humane pressure on the environment.

Concerning bird species, Table 3 shows the data that emerge from the last Report prepared according to article 12 of the Birds Directive. It is worthy to underline that this is the first report produced throughout Europe with criteria similar to those used in the Habitat Directive.

Table 3. Bird population trends comparison in short period (2000-2012) and in long period (1980-2012). Conservation status: Favourable (increase of more than 10%); stable (variation between -10% and +10%); bad (decrease of more than 10%; unknown (missing data).

	Favourable	Stable	Bad	Unknown
Birds species 2000-2012	23%	26%	18%	33%
Birds species 1980-2012	25%	22%	16%	37%

Box 1. Conservation of brown bear (*Ursus arctos)*

Among threatened species, brown bear in certainly one of the flag species, and indeed an umbrella species, as its conservation cannot be considered without granting to a large part of territory a special regime of protection. Italy hosts two distinct population on Apennines and on Alps, each counting approximately 50 specimens (http://www.minambiente.it/pagina/orso-bruno).

In Central Apennines situation is very critical, as population is not increasing despite all efforts and action undertaken to favor it. An exceptional and active initiative involving central and local

authorities and management of PAs is trying to achieve the result and to reduce level of mortality.

On Alps, where brown bear was on the verge of extinction, a reintroduction initiative has been undertaken starting in 1999 with a Life project, with 10 specimens originating in Slovenia being released in the wild in Trentino (http://www.orso.provincia.tn.it/index.php?lang=2).

Following a strong commitment by all Administration and stakeholders, together with a careful consideration of humane-bear conflict, brow bear's population is on constant increase, and widening area of distribution. Even considering the increase in conflicts certainly difficult to manage, their reintroduction project can be considered a success for conservation, bringing back a species absent since centuries.

Q3: WHAT ARE THE MAIN THREATS TO BIODIVERSITY?

In analyzing indicators and outcome of the 3rd Report for Habitat Directive, anthropic threats are stable in number and trends, and they are expected to stand in a short and medium term (Figure 4, Figure 5, Figure 6).

In Table 4 main threat categories for animal and plant species have been listed and categorized according to their occurrence in reporting data-sheet.

Table 4. Main threats for habitat and specie conservation, according to 3rd Report to Habitat Directive.

	Threats	Number of occurrence
Fauna	Change in ecosystem	638
	Agriculture	372
	Forestry	214
	Urbanization	179
	Anthropic disturbance	164
Flora	Change in ecosystem	95
	Agriculture	92
	Natural processes	87
	Anthropic disturbance	76
	Hunting, fishing, plant harvest	60
Habitat	Anthopic disturbance	258
	Transports	243
	Change in ecosystems	231
	Forestry	189
	Urbanization	179

In particular impacts are generated by changes in ecosystem from humane activities (pollution of surface runoff, habitat fragmentation, use of biocides hormones and chemical products), together with forestry and agriculture not properly managed, abandonment of pastoral activities, leading to reduction of semi-natural habitats, to urbanizations and anthropic disturbance. Anthropic disturbace is the main threat to habitats of Union interest, together with the building of infrastructures, cultivation of alien species and change in ecosystems; moreover intentional fires are one of other important threat for conservation of some habitats.

For plant species (and at a less important scale for animal species) direct harvest, despite national and local rules, is still an important threat to conservation.

For marine species, analysis provided in the 3rd Report pointed out that fisheries mortality rank first among threats, followed by pollution, anthropic disturbance and change of ecosystems. For marine habitats pollution rank first, followed by change in ecosystems, while anthropic disturbance, fisheries mortality, transport and change in coastal and littoral habitats having the same impact.

Introduction of invasive alien species should also be considered, being responsible for local extinction, in particular for fish and decapods, and being a potential major threat in a near future.

Here below a brief description of indicators used is reported.

Spreading of alien animal and plant species

Number of alien species in Italy is constantly growing (Figure 7). Available data show that alien species introduced from 1500 are 2,029. On 778 species for which introduction year is known, more important are vascular plants with 13.4% and vertebrates. For this group freshwater fish rank first, followed by Reptiles 11.9%, Mammals 10.6%, Amphibians 9.5% and Birds 9%.

This data are certainly underestimated, lacking an adequate survey activity and late inclusion in the list. Beyond this, species alien for a part of Italy but belonging to another part, have not been included.

Alien insect species number 700 as of 2007 (Zapparoli M., 2007). Terrestrial invertebrates, according to official and grey literature, number more than 1,200 alien species in Italy.

For freshwater fauna, the update in 2007 counts 112 alien species, among those 64 invertebrates and 48 vertebrates (Gherardi *et al.,* 2008.).

According to (Occhipinti *et al.*, 2010.), 165 alien species in marine habitat have been detected between 1945 and 2009 mostly in North Adriatic Sea and Venice Lagoon.

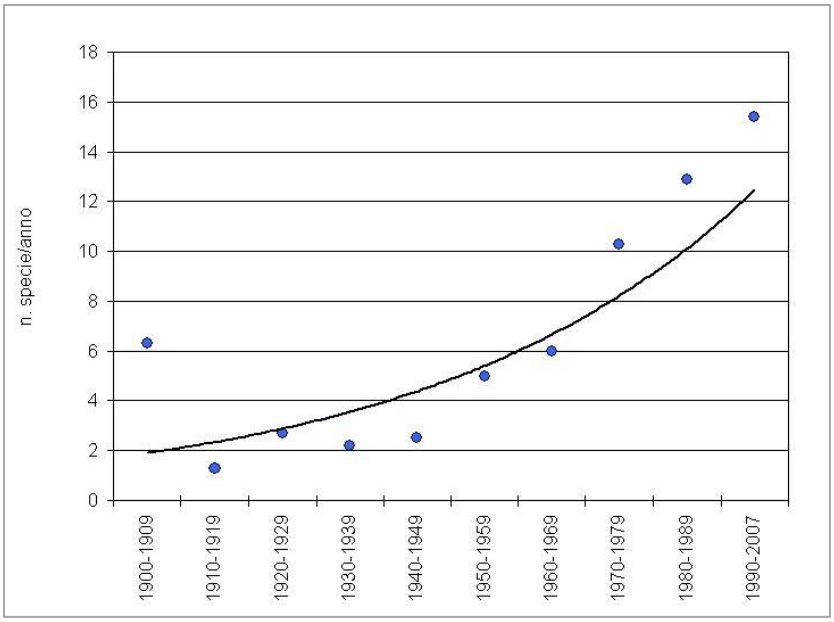


Figure 7. Yearly average of new alien species in Italy, from 1990, calculated on 778 species with proved introduction year (update 2007).

Forest fires

Overall data analysis show a dwindling trend of phenomenum, with peak and mild years. Anyhow a critical period in mid '80 has been noted, with following years always at high level of fires, and then with a progressive diminution till 2006, a sharp rise in 2007, again a decrease in 2008 – 2010 period (46.537 ha), and 2011 (72.007 ha) and new increase in 2012 (130.799 ha).

Most of fires have been confirmed as intentional (Table 5), emphasizing the need of more stringent and effective prevention tools, and certainty of conviction and penalties.

Table 5. Percentage of fires/origin.

Anno	Natural	Accidental	Negligent	Arson	Not defined
			%		
2000	0,9	0,5	11,8	57,7	29,1
2008	0,7	0,9	22,2	65,2	11
2009	1	0,8	17,4	67,2	13,6
2010	1	0,6	19,6	67,9	10,9
2011	0,2	0,2	13,7	71,9	14

Water erosion

Different areas of the country are subject to loss of soil due to water erosion, with relevant economic loss in a hilly areas where valuable agricultural activities are in place. It is not actually possible to define trends, but a constant increase of woodland in respect of agricultural land, will make possible a diminution in mountain areas. On the contrary, increase in use of mechanical means to cultivate hilly areas may foresee an increase of phenomenon, also taking into account an increase strength of rains in later years. Fires in forested areas make the situation even more critical.

The first data on the effectiveness of agri-environmental measures introduced by the new Common Agricultural Policy (CAP) and set out in the National Strategic Plan for Rural Development, showed a significant reduction of erosion as a result of their application.

Urbanization in coastal areas

This indicator provides a picture of the percentage of waterproofing of coastal areas in 2006 and in 2009. Waterproofing in the area within 10km from the shoreline is increasing at a faster rate than at national level. The soil sealing span from 5.3% in 2006 to 5.7 in 2009 in coastal areas, with an increase of 0.4%, while at national basis in the same period percentage increase from 2.8% to 3.0%. In Figure 8 waterproofed areas in costal belt are represented for 2009. More important rates are noted in Liguria, northern Tuscany, in Provinces of Rome and Latina, in Campania and Sicily, in Bari, Taranto and in Adriatic coast from Pescara to Ravenna.

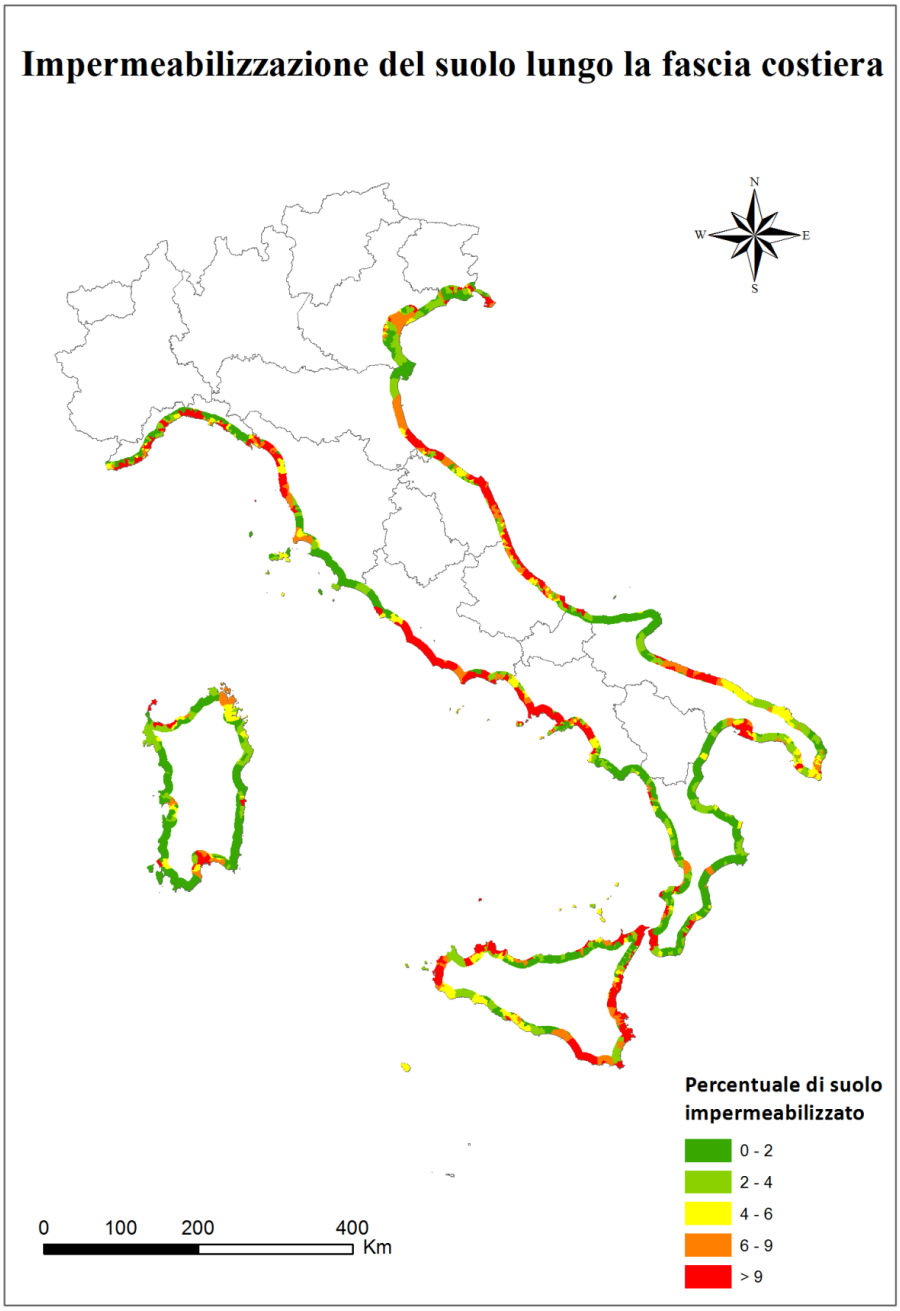


Figure 8. Waterproofed area in coastal belt (10km), data 2009.

Waterproofing and consumption of soil

Data show a continuous increase in consumption of soil, and the importance of progressive decrease in land assets, especially in metropolitan areas, where percentage of land surface covered is higher, and in suburban areas where land id used to built industrial, commercial and transport facilities.

Even the main roads are subject to rapid urbanization and vast agricultural areas are being invaded with vacation houses, shopping centres, industrial hovels, also in areas at high idro-geological risk. Change in land use for humane activities but agriculture is more intense and important in Northern Italy, with the rest of the country showing

lower percentages (Figure 9). Indicator underlines anyhow a continuous increase in land coverage since the end of Second World War.

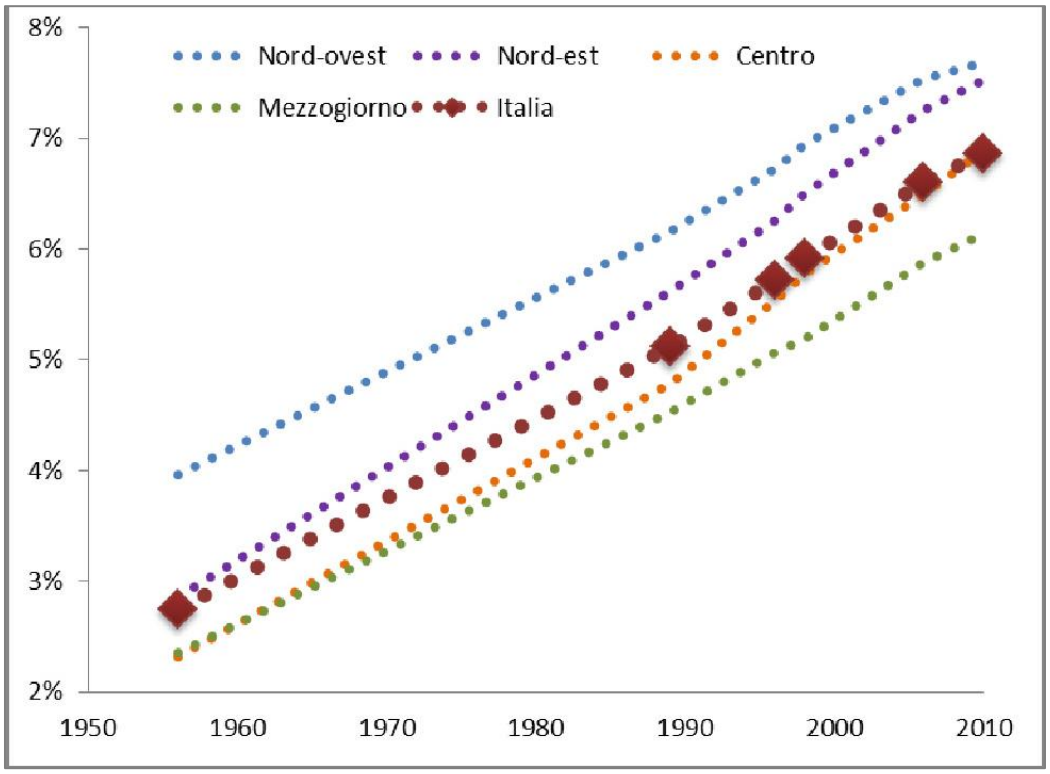


Figure 9. Percentage of soil consumed in Italy and by geographical area.

Land use

(updated to 2006 as in IV Report)

Farms and Utilized Agricultural Area (UAA)

Italian farms and animal husbandries are 1,620,884 and relate to 12,856,048 ha of UAA. With respect to year 2000 an overall decrease of 775,390 farms has been noted (-32.4%). National UAA slightly decreased with respect to 2010 (-2.5%). Note that decrease in numbers of farms did not correspond to decrease in SAU.

Agricultural use of fertilizers (fertilizers, amenders, correctives)

Analyzing trend in period 2000 – 2011 a general decrease is showed, with different trend for various substances, with a sharp increase in organic components as part of organic fertilizers and in organomineral fertilizers (Figure 10).

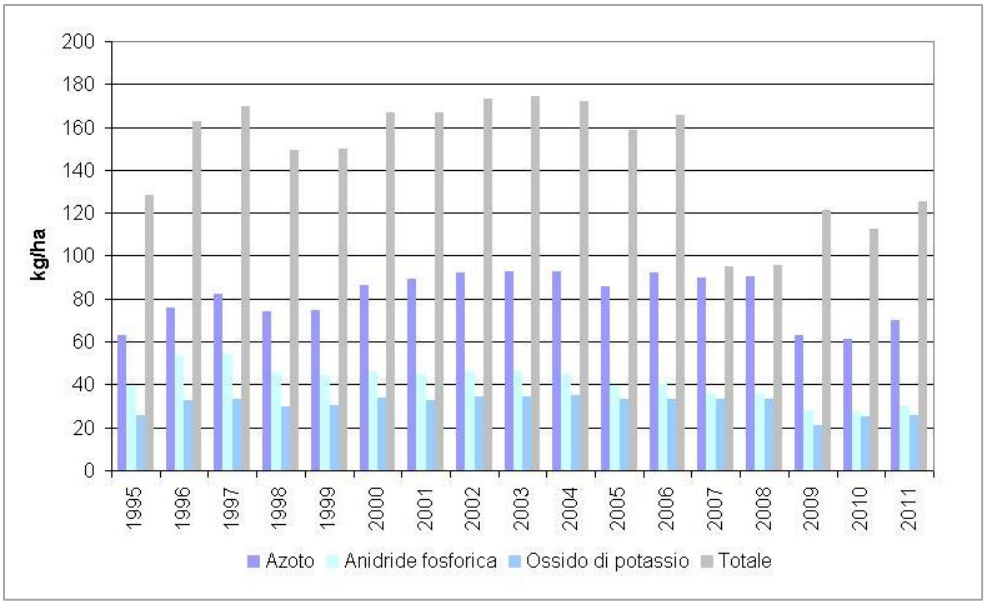


Figure 10. Trend of nutrients per hectare of compostable area.

Agricultural use of plant protection products (herbicides, fungicides, insecticides, acaricidal, and various)

In period 2001-2011, an overall decrease in use of chemical substances has been noted (-7.4%), with patterned and irregular trend for various categories (Table 6). Products allowed in organic farming grew sharply both in percentage and in quantities, with a total amount close to 385t. Herbicides show a negative but dwindling trend. Fungicides show a light decrease in last two years. This trend mirrors new technical and agricultural options, but also new commercial strategies adopted by productive factories.

Table 6. Use of plant protection products.

CATEGORIE	2001	2009	2010	2011
Fungicides	76.629.871	75.147.425	67.707.464	69.891.334
Insecticides, acaricidal	34.022.720	27.541.774	28.160.013	27.571.407
Herbicides	26.672.643	25.679.730	28.128.764	24.086.210
Various	10.337.279	20.694.291	19.911.550	20.876.075
Organic	108.894	410.584	-	-
TOTALI	**147.771.407**	**147.473.784**	**143.907.791**	**142.425.026**

Farms that have joined ecological approach and practicing organic farming

Italian organic agriculture is growing since the 90' at a level significantly more important than in other EU countries, both in agricultural surface than in number of employed. This positive trend however reversed in period 2002-2004 with a reduction of both indicators. After 2005 a new increase was boosted with the approval of new rural plans

that in many Regions have been oriented towards organic productions. Surface converted to organic production in 2011 totaled 1,089,889 ha, with a decrease of 1.5% in respect of 2010. Organic production stand for 8.5% of national UAA. Trend seem therefore rather stable.

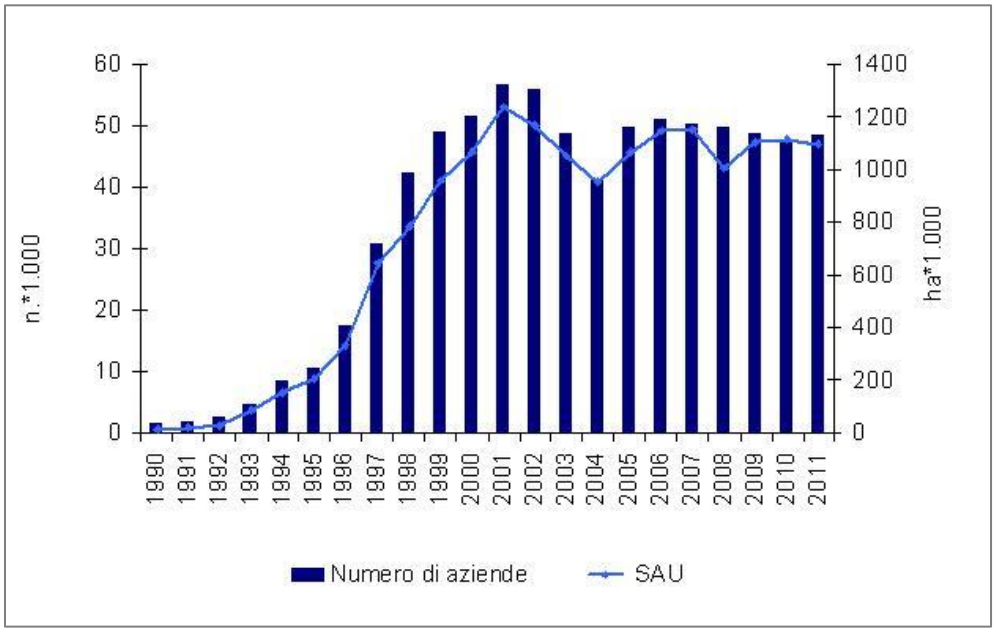


Figure 11. Trend in the number of companies and UAA under organic farming.

Eco-efficiency in agriculture

Evolution of variables witnesses an enhancement of eco-efficiency in Italian agriculture in the period 2005-2010.

This is evident considering the slight recovery of the economic variable, represented by the value added at basic prices, accompanied by the decline of most of the pressure (Figure 12). Actual situation is therefore neatly improving with reference to recent years, even if energy's utilization show discrepancy between the economic growth and decrease of large part of pressures that seems to be insignificant.

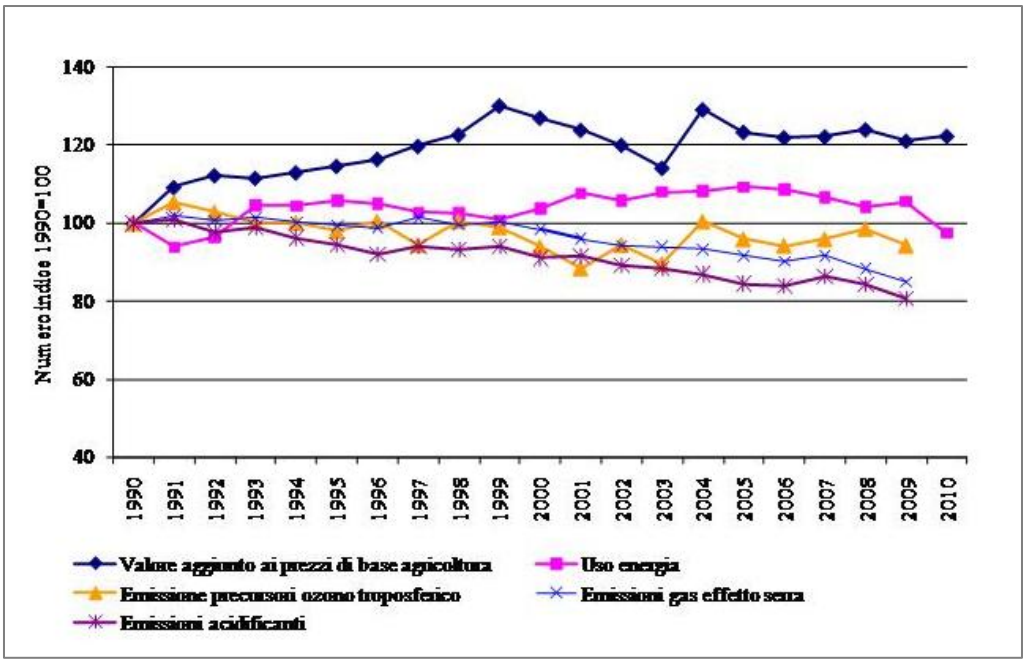


Figure 12. Eco-efficiency in agriculture, expressed as an integrated index of value added at basic prices in agriculture, energy use and emissions of pollutants.

Wood production

Percentage of timber harvest (ration between harvest and forested areas) show a decrease since the 90' (with a ratio of 1.1 m^3/ha), going to 0.7 m^3/ha in 2010.

The rate of utilization of wood is about one fifth of the increase of the current woody volume (40 million m^3).

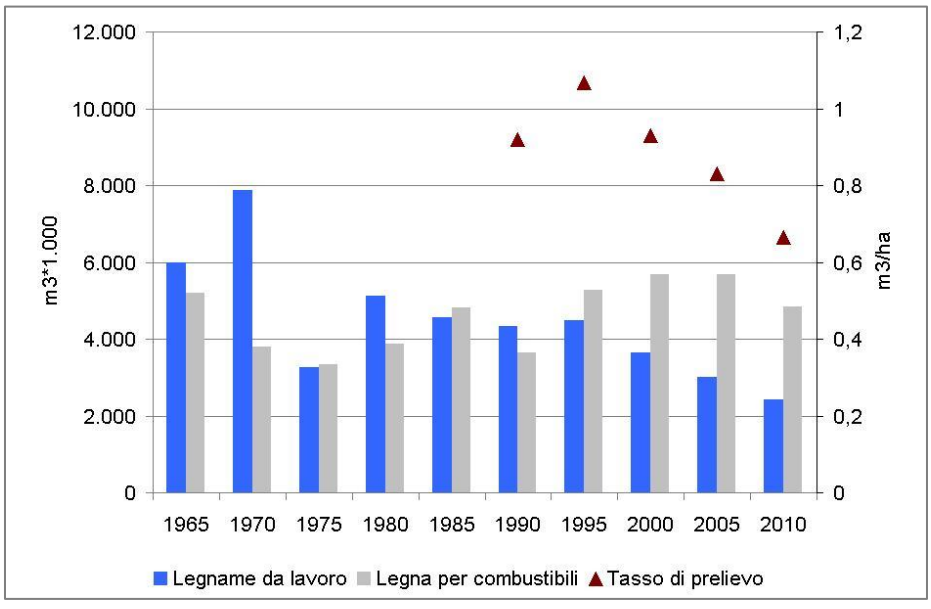


Figure 13. Trend of harvest timber for building and for fuel.

Certification of sustainable forest management

At the end of 2009 about 12% of national forested areas have been acknowledged under at least one of the two certification schemes, PEPC (Programme for the Endrosement of Forest Certification) or FSC (Forest Stewardship Council). By the end of 2012 forested areas with the double certification totalled to 34,725 ha, with 5,800 in Tuscany, 16,347 in Lombardia and 12,578 in Trentino.

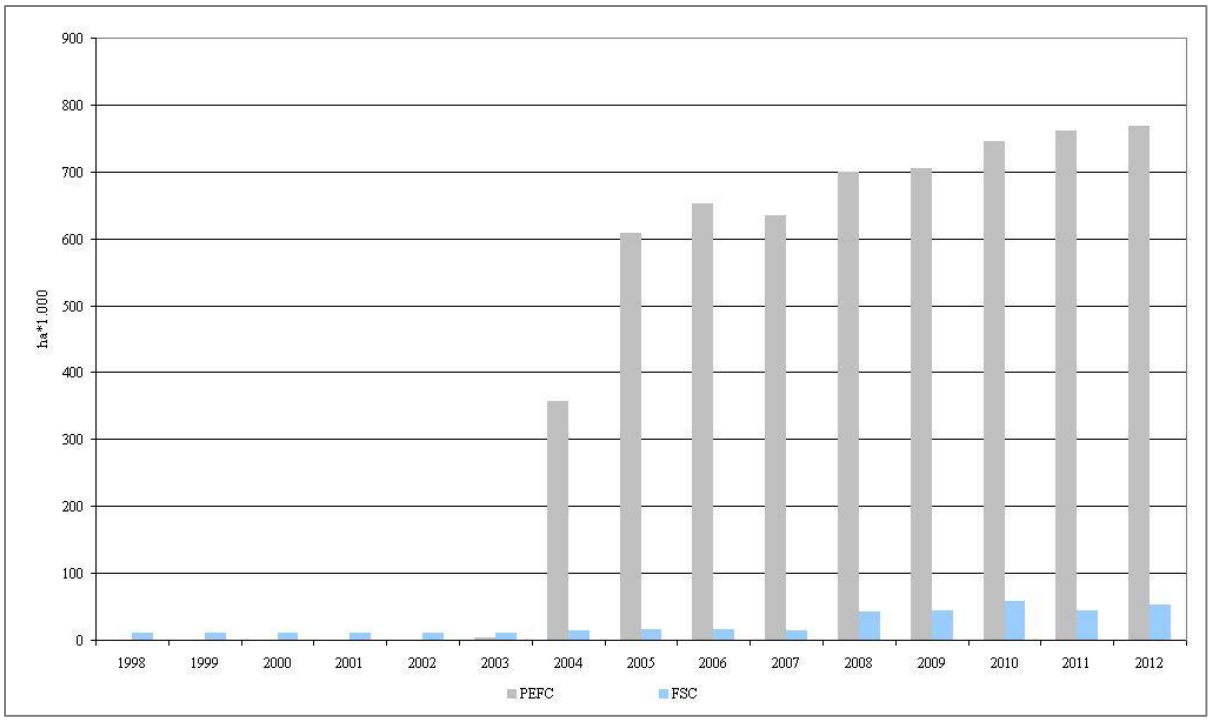


Figure 14. Certified forest areas in Italy according to the schemes PEFC and FSC.

Fisheries

In 2011 decrease trend initiated in 2000 went on, with a shrinking of fishing fleet both in term of number of vessels (-1.2% with respect to 2010) and in fishing capacity (-2.6% with respect to 2010. Also tonnage went through a negative trend (-4% with respect to 2010). Fishing efforts, in a negative trend since 2005, increased from 25.2 in 2008 to 26.5 in 2009, and again decreased from 2009 to 2011 reaching to 23.9; Catch Per Unit of Effort (CPUE) with 8.8 kg/die, are on the same place as last two years (Table 7).

Table 7. Fisheries (source: IREPA – Institute of Economic surveys for fisheries and aquaculture – MIPAAF – Ministry of Agrculture, Forestry and fisheries).

	2009	2010	2011	2012
Fishing effort (Gross tonnage x average days of fishing)	26,5	25,5	23,9	22,8
CPUE (Catch Per Unit of Effort,)	8,8 kg/die	8,7 kg/die	8,8 kg/die	8,8 kg/die

Q4: WHAT ARE THE IMPACTS OF THE CHANGES IN BIODIVERSITY FOR ECOSYSTEM SERVICES AND THE SOCIO-ECONOMIC AND CULTURAL IMPLICATIONS OF THESE IMPACTS?

Humane well-being is strongly linked to the state of the environment, and to the stability and abundance in available natural resources. As a consequence, to guarantee and increase actual and future well-being of people, is of paramount importance to satisfy humane needs promoting development that would not hamper balance and condition of natural ecosystems.

In Italy contradictory data for quality of soil and land: in particular PAs and green space in cities are increasing, but hydrogeological instability still represents an overall natural threat. In addition risks for humane health and natural environment by pollution in several areas of our Country should be put in a safer state and decontaminated.

Ecceptional atmospheric events, more and more frequent in latter years, emphasized how well managed wetlands and river basins are important to mitigate these phenomena. Whereas change in land use concern areas nearby rivers, or coastal and mountain areas, resilience capacity to intense rains is significantly reduced. Balance between settlements, industrial plans, cultivated lands, natural areas and wetlands should be driven back to a point that would allow to manage heavy rainfall. Economic loss have been important where preventive intervention were not in place, and above all where settlement and construction have been placed in naturally flooding. To this end is not an easy task to quantify economic needs to restore land and compare to those necessary to compensate damages following catastrophic atmospheric events.

Drinking water consumption are more or less at the same value of 1999, but with a constant and important leakage in the distribution web; in some Region water supply disruption is rather frequent.

Consumption of renewable energy are on increase, and in 2010 use of green energy in Italy is above EU average. Consumption of local prime resources dims, even it is probably too early to affirm that we are going towards a de-materializaion of Italian economy. Trends in anthropogenetic emissions of gas that halter climate is decreasing , but this is probably linked to the recent economic crisis (http://www.minambiente.it/sites/default/files/archivio/biblioteca/bes_2013.pdf).

PART II: THE NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN, ITS IMPLEMENTATION, AND THE MAINSTREAMING OF BIODIVERSITY

Q5: WHAT ARE THE BIODIVERSITY TARGETS SET BY YOUR COUNTRY?

Q6: HOW HAS YOUR NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN BEEN UPDATED TO INCORPORATE THESE TARGETS AND TO SERVE AS AN EFFECTIVE INSTRUMENT TO MAINSTREAM BIODIVERSITY?

Italy adopted on October 2010 the National Biodiversity Strategy (NBS), as a reference document in order to stick to commitments accepted with the ratification of the Convention on Biological Diversity.

NBS aims to merge and integrate biodiversity conservation targets and sustainable use of natural resources within sectorial policies, and as a consequence the implementation of the vision of the Strategy itself: "Biodiversity and ecosystem services, our natural capital, are valued, preserved and where possible restored, for their intrinsic value and in order to underpin economic prosperity and humane well-being in spite of deep changes occurring at local and global level".

In order to implement it, Strategy has been organized in three main pillars, linked likewise with strategic targets (Figure 15).

Biodiversity and ecosystem services	Biodiversity and climate change	Biodiversity and economic policies
•STRATEGIC TARGET; within 2020 guarantee biodiversity conservation, as variety of live organisms, their genetic variability and ecosystems to which they belong, and to secure protection and restoration of ecosystem services in order to guarantee key roles for life on Earth and ofr humane well-being	•STRATEGIC TARGET: within 2020 substancially reduce in Italy climate change impact on biodiversity, settling suited measure to adapt to changes and to mitigate their effects, enhancing resilience of natural and semi-natural ecosystems.	•STRATEGIC TARGET: within 2020 integrate biodiversity conservation in sectorial economic policies, also to bust new jobs and social cohesion, reinforcing comprehension of assetts of ecosystem services, and awareness of economic loss when damaged.

Figure 15. Pillars of NBS.

In order to reach this targets, 15 working areas have been identified: 1. Species, habitat and landscape; 2. Protected areas; 3. Genetic resources; 4. Agriculture; 5. Forests; 6. Inland water; 7. Marine environment; 8. Infrastructures and transportation; 9. Urban areas; 10. Health; 11. Energy; 12. Tourism; 13. Research and innovation; 14. Education, information, communication and participation; 15. Italy and global biodiversity.

For any of the working areas have been identified: main threats and/or criticisms; main target to tackle these threats, and intervention priorities.

NBS implementation is in line with EU policies dealing with biodiversity, and with European Union Biodiversity Strategy, whose targets are also consistent with Aichi Biodivesity targets. Hence a good match between the three strategies (Table 17 in ANNEX 1).

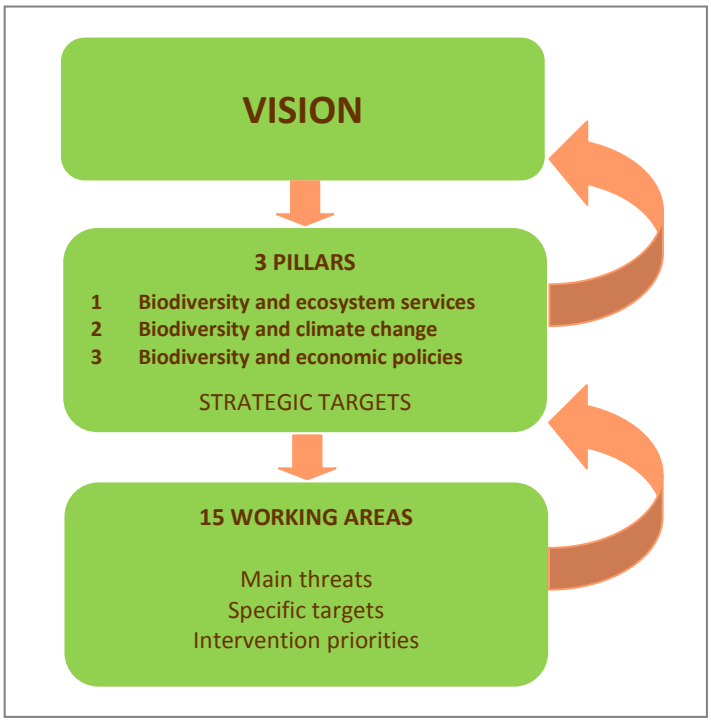


Figure 16. Structure of the National Biodiversity Strategy.

The Strategy has been implemented from 2011 to 2020. In 2015, there will be a shared, in-depth assessment of the validity of the Strategy approach and any need for adjustment.

A report on the implementation of the strategy has been issued every two years; it deal with the progress made towards the achievement of strategic objectives and other specific goals in the individual work areas and has been approved by the National Biodiversity Committee.

In the First Report, regarding the period 2011-2012, the main actions, results and assessment of SNB implementation were described.

Q7: WHAT ACTIONS HAS YOUR COUNTRY TAKEN TO IMPLEMENT THE CONVENTION SINCE THE FOURTH REPORT AND WHAT HAVE BEEN THE OUTCOMES OF THESE ACTIONS?

The paragraph below does not aim to describe every action taken, but rather to highlight key action's achievements. Several of the achievements relate to mainstreaming are described in Question 8.

Governance of National Biodiversity Strategy

The implementation of the National Biodiversity Strategy requires a multidisciplinary approach and a great amount of sharing and collaboration between policy makers and central and regional administrations, with the support of the academic and scientific world, as well as welcoming stakeholders' requests.

It was for this reason that the State-Region Conference was chosen as the venue for policy discussion and decision making with regard to the Strategy. In 2011 the Ministry for the Environment established a special **National Biodiversity Committee (NBC)**, composed of representatives from Central Administrations, Regions and Autonomous Provinces in order to support the activities of the Conference. The **National Biodiversity Observatory (NBO)** offers scientific technical support to the National Biodiversity Committee. The **Consultation Table (CT)**, which involves the National Biodiversity Committee and representatives of main economic/productive and environmental associations, allows for the constant and full involvement of all stakeholders in the process of implementing and reviewing the Strategy.

Indicators of NBS

The preliminary set of NBS indicators was the first synergic result of NBO and JC collaboration. The indicators developed are the primary mechanism for monitoring progress towards the NBS targets. In the first instance 13 indicators of biodiversity state and 30 indicators of evaluation have been developed.

This first set, still not completely implemented, has been tested starting from the writing of this report. NBO and JC partnership will seek to improve the set.

Monitoring

In 2013, ISPRA has coordinated, on behalf of the Ministry of Environment, Land and Sea, the work of preparation of the Report on Birds Directive and the 3rd Report on Habitat Directive, realized with the support of the Regions and Autonomous Provinces, of the Regional Biodiversity Observatories and major national scientific societies. The 3rd Report includes updated data on distribution, conservation status, pressures, threats and trends related to all plant and animal species and habitats of community interest present in Italy (see Part I).

First report on the implementation of NBS (period 2011-2012)

In 2013 the first report on the implementation of NBS was published. MATTM and ISPRA coordinated the process of drafting, with the support of all institutions belonging to JC, NOB and the CT.

A lot of contribution came from consultation process. Finally the JC approved the Report and prepared a programming document until 2015 that will be submitted to the State-Region Conference to enhance the joint effort to NBS implementation.

Financial resources for biodiversity

The Italian Ministry of Environment Land and Sea has set up an inter-ministerial Table on the Strategy for Resource Mobilization so as to fulfill the global commitments made at CBD COP10 in Nagoya, especially to achieve Aichi target 20. All the national competent authorities on the subject are involved in the Table. Therefore, the Ministry of Environment is supported by the Ministry of Foreign Affairs, the Ministry of Economy and Finance, The Ministry of Agriculture Food and Forestry, the Ministry of Economic Development, the Piedmont Region (on behalf of all Italian Regions), the National Institute of Statistics (ISTAT) and the Institute for Environmental Research and Protection (ISPRA).

In the course of its activity the inter-ministerial Table has started the process for the elaboration of a national strategy for resource mobilization.

In addition, the Table committed to bring the issue of resource mobilization into other areas closely related, for example putting the matter on the agenda of the National Biodiversity Committee, as well as in the preliminary discussion about EU Structural Funds Programmes for the period 2014-2020.

Furthermore the Table is in charge of replying to the Secretariat notification that invites Parties to the Convention to provide data on resource mobilization according to the indicators adopted in decision X/3 (Preliminary Reporting Framework). For this purpose the Table has collected data related to the financial resources available to implement the Convention and its Strategic Plan within the Country, from both central government and local authorities (Table 8).

Table 8. Information on the Availability of Financial Resources in Italy in 2010 ("Biodiversity protection" and "Sustainable use and management").

Gov. budgets	2010	2011	2012	Web - link
Central	€ 517.640.684	€ 611.928.740	€ 536.034.885	http://www.rgs.mef.gov.it/VERSIONE-I/Attivit--i/Rendiconto/Ecorendiconto/2012/
State/ Provincial	€ 861.350.000	€ 1.277.450.000	Pending update	http://www.istat.it/it/archivio/109410
TOTAL	**€ 1.378.990.684**	**€ 1.889.378.740**		

International flows data (ODA – Official Development Assistance) are provided by the Italian Ministries of Foreign Affairs and Environment. Both bilateral and multilateral flows were taken into account (Table 9).

Table 9. International Flows of Financial Resources (2010-2012).

International Flows of Financial Resources	2010	2011	2012
ODA - Bilateral	€ 3.656.144	€ 6.264.047	€ 17.819.690
ODA - Multilateral	€ 1.464.814	€ 4.865.758	€ 4.893.662
Total	**€ 5.120.958**	**€ 11.129.805**	**€ 22.713.352**

Italy is among the group of countries that promotes the coordination and harmonization of Reporting Frameworks at EU level.

Lately contacts were made with several private entities and NGOs in order to determine the contribution to biodiversity funding of actors other than public ones.

Rural development program 2007-2013

Rural development programs in Regions and Autonomous Provinces had a pivotal role in order to improve integration between agricultural and environmental policies, with particular reference to conservation and enhancement of biodiversity and ecosystem services in agricultural and forested lands.

It has to be underlined that the overall data of public expenditure linked to Axe 2 "Environment" (Table 10) includes most significant actions to make possible a sustainable management of agricultural and forested land as well as conservation of biodiversity.

In the period 2007-2013, expenditure concerning Axe 2 totaled approximately 6 billion Euros, with measure "agricultural-environmental payments" ranking as the most significant more incisive at local level, favoring the sustainable utilization of agricultural land with about 3 billion provided.

It should be also emphasized intervention proposed with measure 323 (Axe 3) concerning to conservation and requalification of rural estates that allowed setting of management plans for Natura 20000 sites, and activities of monitoring of biodiversity at Regional level.

Table 10. Rural Development Program 2007-2013- Axe 2 "Environment": State of progress for measure of public expenditure and comparison with total RDP. Update at 31-12-13.

Measures Axe 2	Planned public expenditure	of which FEASR	Endorsed public expenditure	of which FEASR
2 211 Indemnities for agriculture for natural drowback	1.121.898.348,00	563.891.508,00	1.026.790.359,13	515.869.036,92
2 212 Indemnities provide to farmers in areas	345.911.843,00	168.710.992,00	315.626.040,47	153.284.573,38
2 213 Natura 2000 allowance linked to Dir.	42.712.249,00	23.389.317,00	13.959.045,25	8.533.549,41
2 214 Agricultural-environmental payments	3.773.920.769,00	1.985.563.520,00	3.170.446.344,13	1.667.432.246,20
2 215 Payments for animal welfare	425.082.068,00	192.701.611,00	343.205.534,98	154.673.669,44
2 216 Non productive investments	239.873.667,00	138.889.520,00	160.225.778,84	90.118.582,82
2 221 First stage of forestation on agricultural land	511.298.829,00	263.109.457,00	373.025.728,90	191.343.889,15
2 222 First stage implantation of forests on agricultural land	1.300.000,00	581.300,00	9.797,04	7.347,78
2 223 First stage of forestation on generica land	52.069.664,00	30.168.633,00	9.850.853,35	6.170.604,12
2 224 Indemnities for Natura 2000	1.277.637,00	562.160,00	52.371,00	23.043,24
2 225 Payments for forestry interventions	42.633.186,00	22.255.768,00	16.097.880,50	9.503.075,32
2 226 Restoring forestry potential	522.928.062,00	295.074.929,00	338.132.739,04	191.361.819,67
2 227 Non-productive investments	254.226.529,00	143.901.122,00	126.505.121,09	70.682.336,32
Total Axe 2	**7.335.132.851,00**	**3.828.799.837,00**	**5.893.927.593,72**	**3.059.003.773,77**
Totale RDP	**17.651.711.151,00**	**8.985.781.883,00**	**11.663. 960.920,42**	**5.885.878.011,38**

Box 2. LIFE Programme in Italy

The LIFE (the Financial Instrument for the Environment) is the EU's financial instrument supporting environmental and nature conservation projects throughout the EU. Since the launch of the LIFE programme by the European Commission in 1992, a total of 688 projects have been financed in Italy. These projects represent a total investment of €1 billion, of which €443 million has been provided by the European Union (http://ec.europa.eu/environment/life/countries/italy.html).

In the period 2007-2013, for nature conservation, 96 projects have been financed, for a total amount of €305 million (Table 11).

Table 11. Italian LIFE+ projects (2007-2013).

		Nature	Biodiversity	Info-nature	Total
2007	**n° project**	9	1		**10**
	co-funding EU	11.506.000	703.000		**12.209.000**
	investment	18.083.000	1.506.000		**19.589.000**
2008	**n° project**	11	3		**14**
	co-funding EU	11.131.000	2.314.000		**13.445.000**
	investment	21.851.000	4.684.000		**26.535.000**
2009	**n° project**	13	2	1	**16**
	co-funding EU	16.162.758	1.190.966	594.707	**17.948.431**
	investment	26.254.153	2.533.007	1.074.026	**29.861.186**
2010	**n° project**	9	2	1	**12**
	co-funding EU	11.070.767	1.724.321	959.674	**13.754.762**
	investment	20.277.807	3.672.303	1.919.348	**25.869.458**
2011	**n° project**	14	2	1	**17**
	co-funding EU	14.486.184	1.647.626	377.895	**16.511.705**
	investment	31.500.000	3.500.000	800.000	**35.800.000**
2012	**n° project**	11	3	1	**15**
	co-funding EU	16.714.813	2.225.452	646.049	**19.586.314**
	investment	26.267.876	4.590.724	1.308.379	**32.166.979**
2013	**n° project**	10	2		**12**
	co-funding EU	13.126.974	1.485.214		**14.612.188**
	investment	24.153.361	2.983.216		**27.136.577**
2007-2013	**n° project**	**77**	**15**	**4**	**96**
	co-funding EU	**94.198.496**	**11.290.579**	**2.578.325**	**108.067.400**
	investment	**168.387.197**	**23.469.250**	**5.101.753**	**196.958.200**

Protected areas

In Italy PAs system includes 872 Natural Protected Areas (6° EUAP DM of 27.04.2010 modified on 31 March 2014) (Table 12).

Table 12. Summary of National system of protected areas at land and sea.

Categories	2009			2013		
	N.	land	sea	N.	land	sea
National Parks	22	1.342.518	71.812	24	1.464.681	71.812
Marine protected areas	20	0	190.082	27	0	222.443
State Natural Reserves	146	122.753	0	148	122.776	0
Other National Protected Areas	3	0	2.557.477	3	0	2.557.477
Regional Nature Parks	105	1.175.111	0	134	1.294.656	0
Regional Nature Reserves	335	214.221	1.284	365	230.240	1.284
Other Regional Natural Protected Areas	141	57.249	18,4	171	50.238	18,4
TOTAL	**772**	**2.911.852**	**2.820.673**	**872**	**3.162.591**	**2.853.034**

To these areas Natura 2000 sites should be added (according to Habitats and Birds Directives). This network has now been completed and major efforts are directed to properly and efficiently manage the areas. In line with European Union committments, a timely procedure to define adequate conservation measures for each site, to draft management plans, leading to define and appoint SACs (Special Areas of Conservation). Shifting from SCIs (Sites of Community Importance) to SACs started in three Regions. Valle d'Aosta (27 areas, 34,606 ha), Friuli Venezia-Giulia (56 areas, 132,175 ha) and Basilicata (20 areas, 30,824 ha). By the end of 2013 Natura 20000 network comprises 2585 areas (Table 13), of which 92 are entirely marine, and 216 are partially marine.

Table 13. Natura 2000 network (SCIs/SACs and SPAs).

	2009	2013
Sites (net from overlapping)	2564	2585
Total surface (ha)	6.194.451	6.390.660

To these are added the Wetlands of international interest established under the Ramsar Convention, which are, however, almost completely overlapping with other types of protected areas.

In 1976, when Italy ratified Ramsar Convention, 18 areas have been designated with a total surface of 12,600 ha; in following years a sharp increase led in 1991 to 46 designated areas with a surface of 57,000 ha. In 2003 4 new areas brought total number

at 50, with a surface of 58,507. In period 2007-2013 14 new areas have been added, with a total of 64 areas for 77,210 ha (Table 14).

Table 14. Wetlands of International imposrtance (Ramsar Convention).

	2009	2010	2011	2012	2013
Sites	53	53	57	57	64
Surface (ha)	59.379	59.379	60.768	60.768	77.210

Among Italian Marine Protected Areas, 11 have been designated as SPAMI areas under Barcelona Convention. In latter years: Punta Campanella and Capo Caccia in 2009, and in 2012 Sinis Peninsula, Capo Carbonaa and Porto Cesareo have added at SPAMI list.

For the UNESCO sites, see Table 20.

All told National Protected Areas system at national and Regional level, together with Natura 2000 network cover an area of 9,474,343, about 21% of national land and 19.1 of marine environment (Table 15, Figure 17), well above threshold fixed by Aichi Target 11.

Data hereunder reported, updated at 31 March 2014, have been also sent to UNEP in order to update WDPA.

Table 15. PAs system with Natura 2000 addition: land and sea coverage/total land and national territorial waters.

	ha	%
Italy's land surface	30130244	100,0
Surface of Land Protected Area	6523072	**21,6**
Italy's territorial waters surface	15436412	100,0
Surface of territorial waters included in protected areas	2951271	**19,1**

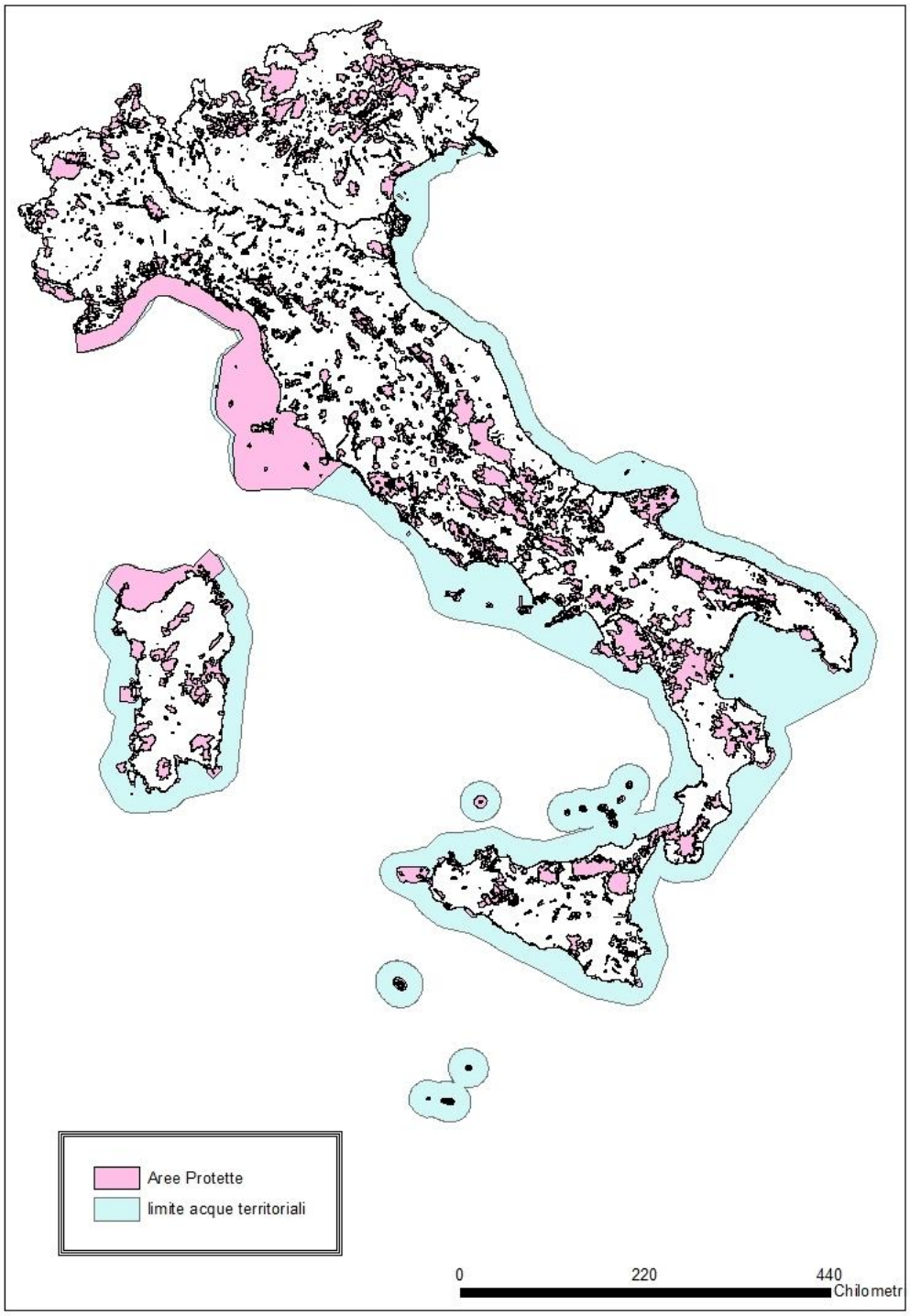


Figure 17. Extension of onshore and offshore system of PAs more Natura 2000 network.

Among target and priorities, paramount importance has been given to the management of protected areas and to the need to enhance a new holistic approach (strategic and taking into account synergies), with the aim, as a priority, to trigger a dialog between adequate scientific knowledge and socio-economic aspects, in order to support policy making process.

To this end from 2011 to 2012 Ministry of the Environment – Nature Protection Department, has set a working group on "environmental accounting" in National Parks, as a forum where to discuss and to compare on a very first figure of natural heritage enshrined in this category of PAs (Box 3).

On these premises on December 2012 has been approved the first Ministerial directive directed to National Park's management, in order to better invest financial resources available in 2013 for a more updated knowledge of ecosystems, and to launch policies aiming to protect biodiversity.

In 2013, a new Ministerial Directive, with the objective of continuity and strengthening of the previous Directive, addressed not only to the National Park Authorities, but also to the management bodies of Marine Protected Areas, was issued thereby expanding the scope of strategic action at national level. With reference to the system of marine protected areas in 2011 a project called ISEA (Standardized Measures of the Effective Management of Marine Protected Areas) started and was tested on SPAMI areas; since 2012, on the basis of this experience the project has been adopted for the whole system of marine protected areas in order to guarantee a uniform planning of interventions and at the same time a characterization because of the specific targets of protection and of the present direct and indirect threats. The planning of intervention is over three years with the identification of annual priorities. This system promotes an increase in the effectiveness of the management and it is important to guide action policies (http://www.naturaitalia.it/home_it/anp/aree-marine-protette/ISEA_2013.html)

Box 3. National Parks: form natural assets to environmental accountability.

Thanks to the cooperation of Universities, Research Institutes, ISPRA, Italian Federation National Parks and Reserves – Federparchi, and State Forestry Corps, attending the working group, it has been possible to provide for the first time, a systematization of data and assessment obtained with different methods of survey, and now suitably integrated to make the synthesis of basic assets of National Parks (http://www.minambiente.it/sites/default/files/archivio/comunicati/Attuazione_Interno_VI_bozza_okx7x_Layout_1.pdf).

Result achieved have also emphasized that:

- National Park's system, with just 4.8% of National surface, offer a significative coverage of the four ecological homogeneous habitats: Boreo-alpine, Apennines, Tyrrhenian Sea and Adriatic sea.
- In National Parks areas CO2 accumulation is more than 5.1 tons higher for ha than in external habitats. Some woods can even double CO2 accumulation. Beechwood contributes to 21% of carbon sequestration.

Moreover PAs halt land consumption: at national level about 17% of woodland has been transformed in artificial surface, while in National Parks their percentage is low as 4.5.

Q8: HOW EFFECTIVELY HAS BIODIVERSITY BEEN MAINSTREAMED INTO RELEVANT SECTORAL AND CROSS-SECTORAL STRATEGIES, PLANS AND PROGRAMMES?

The road to achieve a complete and effective integration of biodiversity matters in policies is one of the main aim for National Strategy for Biodiversity. It is now possible to consider a first balance and emphasize main synergies achieved, as collaboration established with agricultural and forestry sectors, outcome of decision making process to mobilize economic resources and planning of EU funds.

Planning of EU funds 2014-2020

Planning of EU funds 2014-2020 in already in progress, and drafting of documents and Operational Programs have been action of pivotal importance in order to integrate biodiversity in sectorial policies. Reference document in this process is Partner Agreement where an explicit mention of ecosystem service has been done, and conservation actions in Natura 2000 areas proposed in Prioritized Action framework by Regions.

Adoption of ecological network in ordinary planning

Ecological Network is a tool aiming to mitigate habitat fragmentation, and in its ecologicl-functional approach, to ensure permanence of ecosystem process and the connectivity for sensitive species. Ecological Network notion is actually included in Green Infrastructure model, in which ecosystem services supply in the main target to achieve.

Integration of ecosystem approach and of the contents of Ecological Network in territorial planning is among key actions performed by Public Administrations, aiming to tackle habitat fragmentation and to protect natural assets, even if out of PAs.

Many Regions put in place a Regional Ecological Network, even throughout regulatory instruments (Table 16).

At Province's level, the so called Provincial Coordination Territorial Plan (P.C.T.P.) is the instrument of urbanistic and territorial planning used by local Administration to implement and coordinate a management plan, setting targets and fixing major assets. In comparing 2012 data with those of 2009 and 2010, we note a positive trend. Indeed Province where P.C.P.T. is operational with explicit refererence to ecological network increase form 90 in 2009 to 94 in 2010 and to 95 in 2012.

Even status can be considered positive as P.C.P.T. is referring to the ecological network in 89.6% of cases.

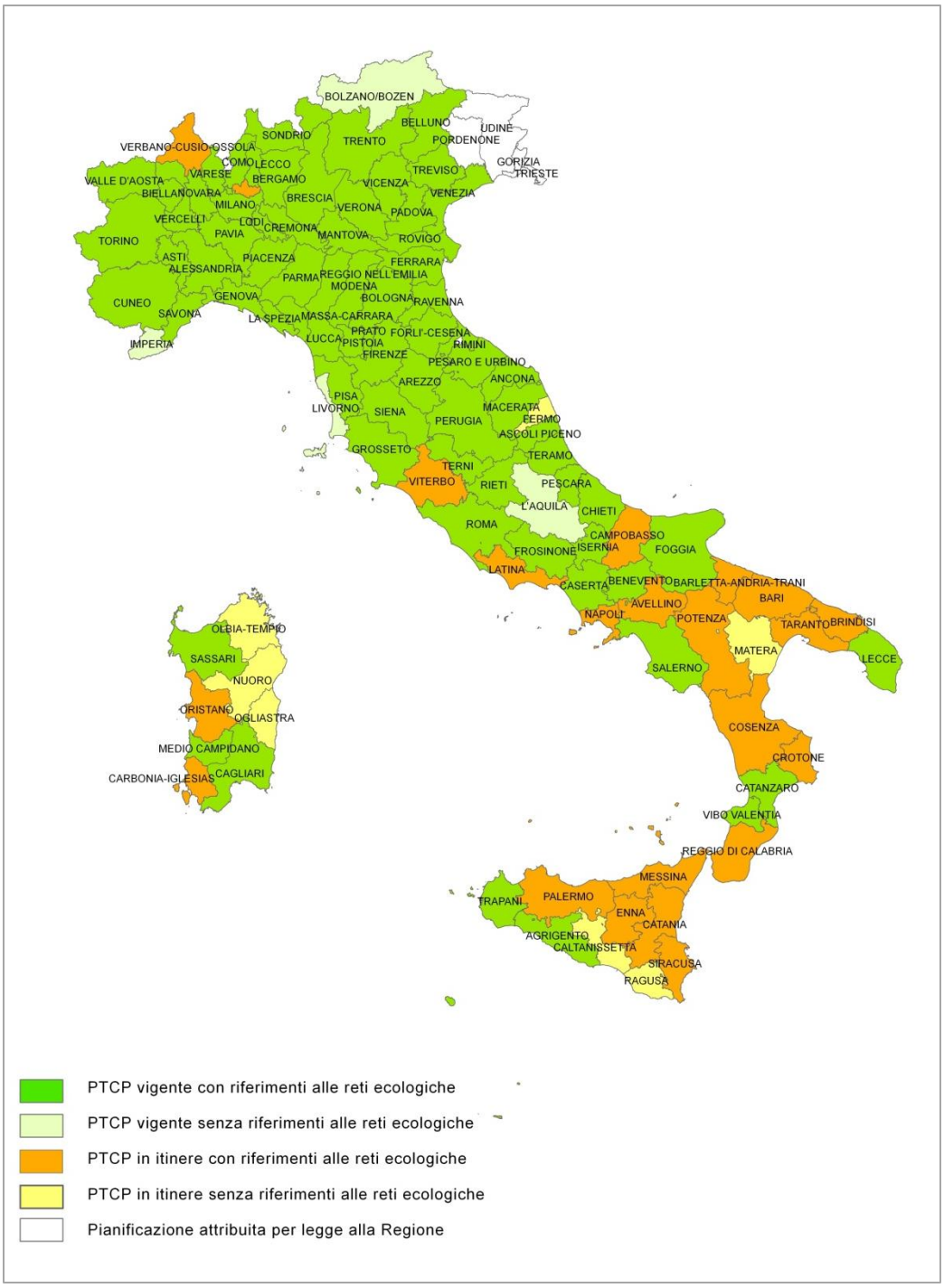


Figure 18. Presence/absence of references to the ecological network in the Provincial Territorial Coordination Plan (December 2012).

Environmental Effects Assessment (EEA), Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA)

A prominent instrument of biodiversity integration in planning is provided by the EEA (art. 6, .3, "Habitat" Directive 92/43 CEE), EIA (Directive 85/337/CEE, modified with 97/11/CE e 2003/35/CE) and SEA (Direttiva 2001/42/CE).

Environmental Effects Assessment is a preventative procedure for which any plan or project that would potentially have negative effects in Natura 2000 site (or proposed site), should take into account conservation targets of the site itself.

EIA Directive for certain infrastructure projects (both of public and private initiative) aims to protect the environment and life's quality.

It is certainly a prime instrument for environmental integration including a wide range of projects, in order to make them sustainable for this perspective.

Plans and projects under Directive 2001/42/CE comprises a wide range of actions, potentially producing environmental effects of various nature and entity. In that sense, assessment of effects that programs/plans can produce on environment should also take into account any interference with Natura 2000 sites.

It is important the integration between the two procedures to avoid overlapping. To this end, and to agree on a common approach, a debate table has been established with Central Government, Regions and Autonomous Provinces, both for SEA and EEA. Starting from critical part of implementation of national and Regional provisions, it has been pointed out that is necessary that the two procedures should investigate at different level; the working group proposed guidelines on specific aspects of SEA and EEA
(http://www.va.minambiente.it/Condivisione/MetadatiRisorsaCondivisione.aspx?ID=d4de67fa-08e1-401b-a5b6-2ce8991ccf7e).

National Strategy for Climate Adaptation

On the same pace of 'United Nations Framework Convention on Climate Change (UNFCCC), Ministry of Environment is completing the draft of a National Strategy for Adaptation to Climate Change. Overall aim of the Strategy is to work out a national vision on how to tackle in the future impacts of climate change, aiming to minimize risks, protect human health and welfare, protect goods and natural wealth, maintain or improve adaptation capacity of natural, social and economic systems, as well as take advantage of possible opportunities.

To this end a confrontation Table has been established involving Ministries, Regions, Provinces, Communes and Civil Defense.

The Strategy will establish for any of the sector of environmental and socio-economic relevance, priority actions selected on the base of the assessment of current and foreseen impacts from climate change.

Among priorities, according to NBS, there are intervention aiming to maintain and restore biodiversity e related ecosystem services, to guarantee resilience to climate change and as a natural defense against climate change consequence.

Specific targets will be water basins, public owned woodland, considered as fundamental green infrastructure, and coastal ecosystems.

At the moment the text of the Strategy has been published on-line for a public consultation (http://www.minambiente.it/notizie/elementi-una-strategia-di-adattamenti-climatici).

Box 4. Global Strategy for Plant Conservation (2011-2020)

Mainstreaming approach that is peculiar to National Strategy for Biodiversity was also applied to the integration of 16 targets concerning Global Strategy for Plant Conservation 2011-2020. As already pointed out in IV report GSPC is a pivotal reference tool in order to promote a better knowledge on extent and value of ecosystem services linked to plant diversity, its sustainable use in various sectors, and make aware researchers, users, policy decision makers and citizens. Participation of Italian botanists to initiatives and projects of international importance, *inter alia* the adhesion to *Planta Europa*, allow Italy to actively contribute to the implementation and future updating of European Region Plant Conservation Strategy for 2014-2020. In drafting present report results of performed activities concerning GSPC have been included in Aichi target section, following references provided in Annex 4 of UNEP/CBD/LG-GSPC/4/2.

Agriculture and forestry

Within Nation Plan for Biodiversity of agricultural interest (MiPAFF 2008), aiming to preserve and enhance the value of genetic resources in agriculture, several activities have been promoted, in order to coordinate of regional initiatives and to smooth relationship with international and national bodies that are dealing with Agricultural biodiversity. In this framework have been released "Guidelines to preserve and characterize plant, animal and microbial diversity relevant for agriculture".

These Guidelines, in synergy with National Strategy for Biodiversity are a practical support for farmers that care for biodiversity, with reference to foreseen interventions in the framework of Rural development plans at Regional level and for protection of genetic resources

National Rural Network is the Italian counterpart of the wider European Rural Network (ERN), in order to accompany and integrate all activities linked to rural development in period 2007-2013.

National Rural Network 2007-2013, managed by Ministry of Agricultural, food and forestry policies, provided a good opportunity within rural development, in order to better integrate intervention to strengthen competitivity in agricolture, forestry and environment with actions aiming to improve life quality and economic diversification.

In July 2011 it has been established a "Production chain table", with 4 working groups, aiming to draft a Sectorial Plan for officinal plants, attended by representatives of local Administrations, Universities, Research centers, representatives of several Ministries and stakeholders. In these two years some workshop have been held with production of

documents
(http://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/7562).

In September 2013, after two years of negotiation, it has been defined the new European Forestry Strategy COM(2013) 659, replacing that in force since 1998. Based on a new approach, this strategy "go out of the forest" to address the so called value-chain (use of forests product to generate goods and services), that have a fundamental role in forestry management. This strategy emphasize importance of forests not only for rural development, but also for environment, biodiversity, for forestry, green energy and contrast of climate change.

Box 5. Communal green

With the approval of law 14 January 2010 n.10 (rules for development of urban green areas) http://www.minambiente.it/sites/default/files/archivio/normativa/legge_14_01_2013_10.pdf it has been established the "National tree's day" on 21 November with the aim to implement Kyoto protocol throughout the enhancement of forestry (Kyoto protocol has been ratified by Italy on 1 June 2002), and in order to reduce emissions, to prevent hydrogeological imbalance, to improve air quality, to give adequate value to traditions linked to trees in Italian culture, and to obtain a better life quality in urban areas. The National Committee for Communal green promotes knowledge of forest ecosystems in all schools, and is a benchmark to coordinate monitoring activities at local level.

Italy and world's biodiversity

Since 2011 Ministry of Environment – Nature Protection Directorate, is responsible for Biodiversity matters, expressed its willingness to reinforce synergies among Biodiversity-Related Multilateral Environmental Agreements and biodiversity related Conventions, putting under a unique Unit management of various agreement: CBD, Nagoya Protocol, Eurobats and AEWA, Bern Convention, Global agreement on forests.

As highlighted in this report, this has allowed us to make the most synergistic activities carried out to achieve the Aichi Targets and avoid duplication of efforts.

In implementing commitments in CBD framework, Nature Protection Directorate developed a collaboration with Foreign Affairs Ministry as well as with other departments responsible for Rio+20 process and for the implementation of UNFCC. Other than specific targets of collaboration, this effort allowed to reinforce information swap, and favored the agreement on concerted action in environmental matters, with particular reference to Rio+20 and Climate change.

In June 2011 Italy signed the Nagoya Protocol in ABS (Access and benefit Sharing).

CMS

At CMS COP 11, held in Bergen (Norway) in November 2011, Italy subscribed two new Memorandum of Understanding (MoU on European Raptors and MoU on Sharks).

EUROBATS

Since 2007 Italy is member of the Standing Committee of EUROBATS agreement, established to afford protection on European bats. In order to secure appropriate synergies, the participation to the Standing Committee is performed by the same Unit responsible for CBD matters.

FAO

Since 2010 Ministry of the Environment and FAO have an ongoing collaboration on a project "Working Together Towards the Biodiversity 2010 Target: Support to the FAO Cooperation with the Convention on Biological Diversity (CBD) and Environmental/Biodiversity-related Conventions and Multilateral Environmental Agreements (MEAs)".

Forests

In FLEGT program framework (Forest Law Enforcement, Governance and Trade) is underway a national system for timber traceability, supported by an EU contribution of 2 M Euros, cofinanced an national level with 1.08 M Euros. With Decree 9 November 2011 issued by Ministry of Agriculture and forestry, an Inter-ministerial Working Group on FLEGT has been established (with the attendance of Ministry of Environment), tasked to better define implementing provisions for FLEGT and EU timber Regulation.In the proposal of transposition for both Regulation, MATTM is promoting the establishment of a body (Consulta) that would smooth relationship among Public Administration and stakeholders, to tackle specific shortcomings, and aiming to integrate verification of legality at international level with protection of biodiversity and ecosystem service provided by forests, and of sustainable management of forests.

Italy takes part to GEF (Global Environmental Facility), financial mechanism for CBD and othe UNEP Conventions. Throughout this fund, several initiative have been funded, with particular concern to forest issue and to project of REDD (Reducing Emissions from Deforestation and forest Degradation) and REDD +. During the period 2010-2012 GEF funded more than 19 M dollars REDD+ projects, and other 79.99 M dollars used within bilateral cooperation (in addition 5 M dollars for the Forest Carbon Partnership facility totaling 104.29 dollars). Different interventions realized promoted sustainable use and management of natural resources and biodiversity in forested areas, as well as prevention of fires.

Cooperation

General Direction for Cooperation and Development (Ministry of Foreign Affairs), in its planning 2011-2013, identified the environment as priority and cross-cutting sector of intervention, promoting several projects, and giving particular consideration on biodiversity issues.

At Rio + 20 Conference, Italian Cooperation proposed some side events on partnership of island, mountains, trans boundary management and water, launching a 1.5 M euro commitment to support development of green energy project in the Small Island Developing State in Pacific Ocean.

Q9. HOW FULLY HAS YOUR NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN BEEN IMPLEMENTED?

A global picture on implementing status of National Biodiversity Strategy turns out mainly from results depicted in Report 1 for period 2011-2012.

In Figure 19 a synthesis on implementing status of National Strategy is recorded. Concernign 15 working areas implementing status has been ranked going from green to red (green: implemented in 2011-2012; yellow (implementation is underway but defined), orange (implementation underway, but not yet defined), grey (not assessed for lack of information) and red (not yet started).

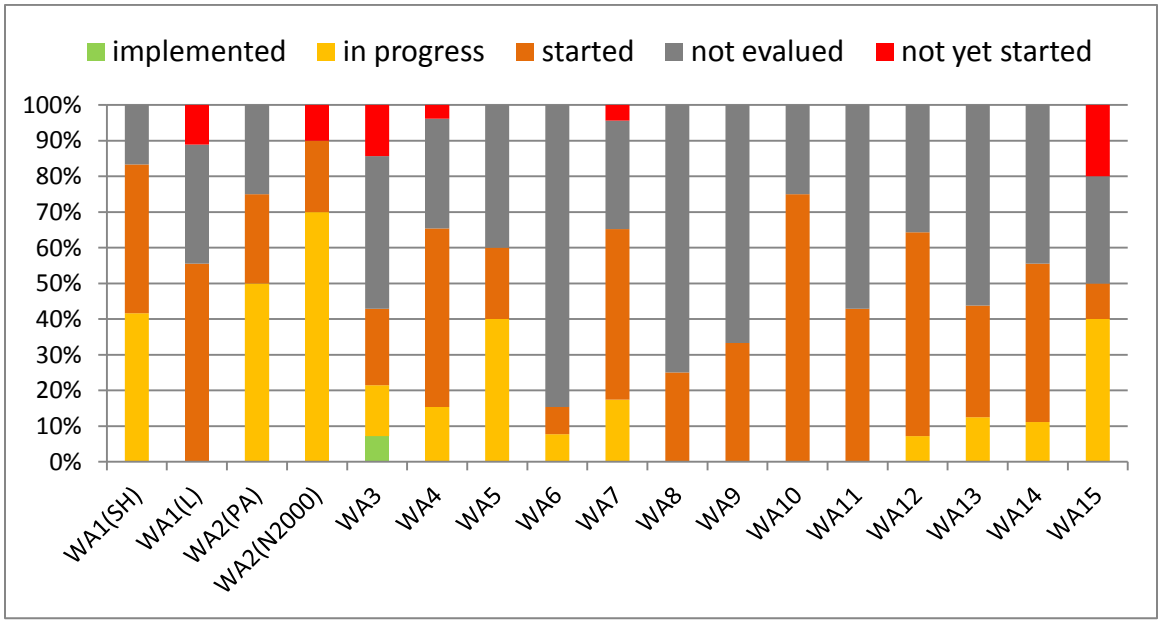


Figure 19. Implementation of priorities in 15 working areas of NSB: Synthesis of evaluation. WA: Working area; 1 SH: Species and habitats; 1L Landscape; 2PA: Protected areas; 2N2000: Natura 2000; 3: Genetic resources; 4: Agricolture; 5: Forests; 6: Inland waters; 7: Marine environment; 8: Infrastrucres and transports; 9: Urabn areas; 10: Health; 11: Energy; 12: Tourism; 13: Research and innovation; 14: Education, communication, public awareness and participation; 15: Italy and biodiversity in the world.

From the analysis of results become clear that inclusion of protection and conservation of biodiversity in sectorial policies is not that effective. To date there are several guidelines but to obtain concrete conservation results these should be translated in policy actions. Indeed some local experiences have been successfully completed; such situation seems more evident for working areas linked to economic sectors.

Hence the need to strengthen information swap and increase efforts in defining systemic actions that would allow to have more efficient, consistent and coordinated guidelines and implementation performed by Central Administration, Regions and local Administrations.

For this reason coordinated actions either concerning financial resources mobilization, Pas, systematization and disclosure of knowledge on national biodiversity are certainly upstanding path that would hopefully allow the achievement of NBS targets in the coming years.

PART III: PROGRESS TOWARDS THE 2020 AICHI BIODIVERSITY TARGETS AND CONTRIBUTIONS TO THE RELEVANT 2015 TARGETS OF THE MILLENNIUM DEVELOPMENT GOALS

Q10: WHAT PROGRESS HAS BEEN MADE BY YOUR COUNTRY TOWARDS THE IMPLEMENTATION OF THE STRATEGIC PLAN FOR BIODIVERSITY 2011-2020 AND ITS AICHI BIODIVERSITY TARGETS?

In recent years, thanks to governance system in NBS, important progress have been achieved in terms of information sharing between stakeholders and policy sectors. Nonetheless, as already noted in the first report on NSB, more efforts are needed to enhance information sharing.

To compile this section, a synthetic form has been used with the aim to evidentiary efficiency of actions undertaken in Italy to achieve Aichi targets. However it was not always possible make use of indicators as implementing process on set of indicators has not yet been completed

Even we are aware that synthesis requested is not clearly showing all different ongoing initiatives, it has been tried to describe changes that followed actions, and to provide an broad evaluation of efficiency of action themselves in order to achieve each Aichi target.

Assessment of change over time (2009-2013)

- Improving
- Little or no overall change
- Insufficient or no comparable data

Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society.

Target 1	**By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.**				
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of change**
2010: Preparatory process of National Strategy for Biodiversity	http://www.minambiente.it/pagina/strategia-nazionale-la-biodiversita	The results of the Eurobarometer of European Commission on Attitudes towards biodiversity show that percentage of Italian people awared of the importance of protecting biodiversity is increasing from 2007 to 2013 and often above the EU average.	http://ec.europa.eu/public_opinion/flash/fl_290_en.pdf http://ec.europa.eu/public_opinion/flash/fl_379_fact_it_en.pdf	Work area 14 targets	Improving
2013: National conference on biodiversity and protected areas: the green economy to enhance our country	http://www.minambiente.it/pagina/la-natura-delitalia				
2013: Implementation of web portal NaturaItalia aimed both common people and specialist to disseminate about biodiversity topics	http://www.naturaitalia.it				

Target 2	By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.					
Italian contribution to global target		**Summary of change**			**Related national targets**	**Assessment of contribution**
2011: Activation of governance bodies of NBS (National Biodiversity Committee, National Biodiversity Observatory and Consultation Table)	http://www.minambiente.it/sites/default/files/archivio/allegati/biodiversita/dm_06_06_2011.pdf	See: Governance of National Biodiversity Strategy			Strategic objective 3	Improving
2013: National conference on biodiversity and protected areas: the green economy to enhance our country.	http://www.minambiente.it/pagina/la-natura-delitalia				Strategic objective 3	Insufficient or no comparable data
Since 2010 National Accounts Department has been published the yearly national eco-accounting on the public expense of central administration for biodiversity	http://www.rgs.mef.gov.it/VERSIONE-I/Attivit--i/Rendiconto/Ecorendiconto/2012/				Strategic objective 3	Little or no overall change

Target 3	By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.					
Italian contribution to global target		**Summary of change**			**Related national targets**	**Assessment of contribution**
State incentives for energy efficiency	http://efficienzaenergetica.acs.enea.it/index.html	Period 2007-2012: Energy saving: 9.000 GWh/year; CO2 emission: -2.000 kt/year	http://efficienzaenergetica.acs.enea.it/doc/rapporto_2010_pubblicato.pdf		Targets of work area 11	Improving

Target 4	By 2020, at the latest, Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.				
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of contribution**
Legislative decree on containment land-use and reuse of soil built that set progressive reduction of soil consumption.	http://www.minambiente.it/sites/default/files/archivio/comunicati/ddl%20contenimento%20consumo%20suolo.PDF	No data		Targets of work areas 4 and 9	Insufficient or no comparable data
State incentives for energy efficiency	http://efficienzaenergetica.acs.enea.it/index.html	Period 2007-2012: Energy saving: 9.000 GWh/year; CO2 emission: -2.000 kt/year	http://efficienzaenergetica.acs.enea.it/doc/rapporto_2010_pubblicato.pdf	Targets of work area 11	Improving

Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use

Target 5	By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced				
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of contribution**
Integration of ecological network in planning: key action performed by Public Administration to tackle land fragmentation and to protect prime natural elements even outside protected areas		From 2009 to 2012 increase of provincial planification instruments that refer to ecological network	See response to Q8 and Figure 18	Strategic objective 1	Little or no overall change

Framework program for forestry	http://www.reterurale.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/416			Targets of work area 5	Improving
Traceability production chain for 2012-2014, aimed at support an economy of forestry that take into account environment protection and land management	http://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/5728			Targets of work area 5	Insufficient or no comparable data

Target 6	**By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.**				
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of contribution**
Implementation of Common Fishery Policy with reduction of direct mortality by fisheries throughout new limitation of fishing efforts, limitation in use of specific fishing gear and establishment of periods of closure.		Progressive reduction of fishing effort from 2009 to 2012	See Table 7	Targets of work area 7	Improving
Implementation of Barcelona Convention –– Implementation of land based sources protocol In the framework of GFCM red coral monitoring program	http://www.minambiente.it/pagina/convenzione-di-barcellona	Establishment of new PAs according to SPAMI protocol (Specially Protected Areas of Mediterranean Importance): from 7 PAs in 2009 to 10 PAs in 2012	http://www.minambiente.it/pagina/aree-specialmente-protette-di-importanza-mediterranea-aspim	Targets of work area 7	Improving

Target 7 By 2020, areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity					
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of contribution**
Rural development program 2007-2013	http://www.reterurale.it	2007-2013: expenditure concerning Axe 2 totaled approximately 6 billion Euros, with measure "agricultural-environmental payments" ranking as the most significant more incisive at local level, favoring the sustainable utilization of agricultural land with about 3 billion provided.	See Table 10	Target of work area 4	Improving
Legislative decree on sustanaible use of plant protection product and to reduce the risks and impact on human health, environment and biodiversity	http://www.minambiente.it/sites/default/files/archivio/normativa/dlgs_14_08_2012_150.pdf	National Action Plan to promote a sustainable use of phythosanitary products	http://www.minambiente.it/sites/default/files/archivio/normativa/dlgs_14_08_2012_150.pdf	Target of work area 4	Improving
Implementation of Reg.CE 1100/2007		National Management Plan on eels, approved with Decision Eu 4816(2011)		Target of work area 7	Little or no overall change
Implementation Reg. CE 708/2007, 506/2008 e 535/2008		National register for management and control of invasive alien species	http://www.registro-asa.it/icr_index.php	Target of work areas 6 and 7	Little or no overall change

Target 8	By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity				
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of contribution**
Database on prohibited or restricted substances on the basis of Regulation REACH	http://www.dsa.minambiente.it/restrizionisostanze/			No directly related target	Insufficient or no comparable data
Legislative decree on sustanaible use of plant protection product and to reduce the risks and impact on human health, environment and biodiversity	http://www.minambiente.it/sites/default/files/archivio/normativa/dlgs_14_08_2012_150.pdf	National Action Plan for the Sustainable Use of Plant Protection Products	http://www.minambiente.it/sites/default/files/archivio/normativa/dlgs_14_08_2012_150.pdf	Target of work area 4	Improving

Target 9	By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment				
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of contribution**
2010: Inventory of terrestrial alien species of vascular plants	http://www.minambiente.it/sites/default/files/archivio/biblioteca/protezione_natura/dpn_flora_alloctona.pdf			Targets of work area 1	Improving
IAS eradication projects in small islands	http://www.montecristo2010.it/	In progress		Targets of work area 1	Insufficient or no comparable data
IAS containment projects		*Silurus glanis* (es. Consorzio dell'Oglio, 2011 - "Piano di Contenimento del Siluro (*Silurus glanis* L.) nelle acque del F. Oglio Sublacuale":	http://www.oglioconsorzio.it/attachments/article/84/Proposta%20di%20progetto%20per%20contenimento%20del%20siluro.pdf)		Insufficient or no comparable data

Target 10	By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning				
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of contribution**
Implementation of marine strategy, according to EU Directive adopted on 2008	http://www.strategiamarina.isprambiente.it/	1. Italy has already performed its initial assessment, and is now defining environmental indicators. 2. Monitoring plans have been drafted and the approval is expected by July 2014. 3. *Posidonia* beds have been monitored in all Regions where this plant is present. No specific actions have been taken for the time being in order to mitigate changes in ecosystems following climate change and acidification.		Targets of work area 7	Improving

Strategic Goal C: To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

Target 11	By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.				
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of contribution**
Increase in coverage of protected areas at land and sea		31 March 2014: Protected land area 21,6%, protected marine area 19,1% of total Italian territory (see Table 15)		Targets of work area 2	Improving
Approval of planning/management tools of the national and regional protected areas		From 2009 to date planning instruments in force in national park have increased by 12.5% to 33%		Targets of work area 2	Improving
2013: Environmental accounting in National Park	http://www.minambiente.it/sites/default/files/archivio/comunicati/Attuazione_Interno_VI_bozza_okx7x_Layout_1.pdf			Targets of work area 2	Improving
December 2012: First Ministerial Directive for Park Administrations, in order to steer use of financial resources available in 2013, to update knowledge of ecosystem, and to adopt active political actions to protect biodiversity		Park Administration have submitted their proposals for actions aiming to protect biodiversity: - 2 cross-cutting system actions, concerning more than one areas at the same time; - 7 System actions, concerning a single area; - 15 "complementary actions" to "system actions", peculiar for a single Park	Results of these activities are about to be completed and will be made available in Ministry's website dedicated to national Parks	Targets of work area 2	Insufficient or no comparable data

2013: Partnership agreement between MATTM and main national stakeholders directed to fill gaps in knowledge, both in socio-economic and scientific fields, in order to define a set of indicators for national protected areas		It has been realized collation and cataloguing of studies and monitoring activities performed by national Parks, on amounts of natural heritage	www.naturaitalia.it	Targets of work area 2	Insufficient or no comparable data
Adoption of the European Charter for Sustainable Tourism	http://www.europarc.org/what-we-do/european-charter-for	In 2009 ECST certification was achieved by only one national Park. By the end of 2013, with Federparchi's support, ECST certification has been achieved by 4 more National Parks. Procedure is underway for other 4 national Parks and one more Marine protected Areas, whit 4 more national parks with an ongoing procedure.		Targets of work area 2	Improving
2011: Guidelines for the protection of wetlands have been defined, it based on integration of both Ramsar and CBD Convention with the Bird and Habitat Directives, Water Framework Directive and the Marine Strategy Framework Directive.	http://www.isprambiente.gov.it/en/publications/reports/contributi-per-la-tutela-della-biodiversita-delle-1 http://sgi2.isprambiente.it/zoneumide/allegati/Rapporto%20107%20bassa.pdf	Aprile 2013: approved by National Biodiversity Committee NBS			Improving
		The project has been considered one of the case studies of the working group set up by the European Commission dealing with the integration of European Directives.			

Target 12	By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained					
Italian contribution to global target		**Summary of change**			**Related national targets**	**Assessment of contribution**
2013: Guidelines for the Translocation of Wild Plant species	http://www.minambiente.it/sites/default/files/archivio/biblioteca/protezione_natura/qcn_38_linee_guida_traslocazione_specie.pdf	The Guidelines show the results of about 20 years researches and practical experiences, focused on the amelioration of translocation techniques. Plant translocations are high risk options with high rate of failure, that can be reduced through the application of rigorous protocols and the development of ad hoc techniques. The book is a synthesis of the newest knowledge in the field of translocations			Targets of work area 1	Insufficient or no comparable data

Target 13	By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity					
Italian contribution to global target		**Summary of change**			**Related national targets**	**Assessment of contribution**
2012: National guidelines for the in-situ conservation, on-farm and ex-situ biodiversity of plant, animal and microbial agricultural interest.	http://www.reterurale.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/9580	It is the first significant work in which in addition to the operational guidelines for the protection of plant and animal biodiversity were also included those related to food and microbial soil. It is a practical response to the needs of operators working in the field of the protection of agro-especially in the context of regional rural development programs (protection of genetic resources).			Target of work areas 3 and 4	Improving

December 2013: The first italian inventory of in situ maintened landraces realizzato nell'ambito of the project PGR Secure project.	http://www.pgrsecure.org/ http://vnr.unipg.it/PGRSecure/	The creation of the landraces inventory represents a means of safeguarding them and of implementing conservation strategies. This landraces inventory is the result of the work on Plant Genetic Resource carried out by Italian Regions and Autonomous Provinces across the last two decades and reports data available at Jannuary 2013.		Target of work areas 3 and 4	Improving
December 2013: National Network on Plant Genetic Resources for Food and Agriculture	HTTP://PLANTA-RES.ENTECRA.IT			Target of work areas 3 and 4	Insufficient or no comparable data
Recognition and evaluation of germplasm banks of wild flowers considered in danger of extinction	http://www.isprambiente.gov.it/it/temi/biodiversita/accordi-multilaterali/nazionali/convenzione-ispra-ribes-201cvalutazione-delle-collezioni-ex-situ-in-banche-del-germoplasma-di-specie-minacciate-della-flora-italiana201d			Target of work areas 1 and 3	Improving

Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services

Target 14	**By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.**				
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of contribution**
Implementation of "Water framework Directive" 2060	http://www.direttivaacque.minambiente.it/index.html	Identification of eight river basin districts and preparation of related management plans	http://www.direttivaacque.minambiente.it/distretti_idrografici.html	Targets of working area 6	Improving
		Information System for Water Protection in Italy (SINTAI), Italian node of the system Water Information System for Europe (WISE) made with open source technologies, for reporting to the WFD 200/60/CE	http://www.sintai.sinanet.apat.it/	Targets of working area 6	Improving
		2011: established a national ad hoc Istitutional/technical working group (MATTM, ISPRA, regions, CNR-IRSA, CNR-ISE, ENEA, ISS, ARPAs) to verifie and to applie monitoring criteria for ecological status of water body evaluation	http://sgi2.isprambiente.it/zoneumide/#	Targets of working area 6	Improving

Target 15	**By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.**				
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of contribution**
National Strategy for Climate Change Adaptation	http://www.minambiente.it/notizie/elementi-una-strategia-di-adattamenti-climatici	In progress		Strategic objective 2	Insufficient or no comparable data

Target 16	By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation..					
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of contribution**	
Italy signed the Protocol on 23 June 2011 in New York, contextually with the European Union and 11 Member States.	http://www.minambiente.it/pagina/protocollo-di-nagoya-abs	Signature of the Protocol; participation to the European Union negotiation for the definition of the EU legislation on ABS.		Targets of working area 3	Improving	

Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building

Target 17	By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.				
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of change**
Governance of National Biodiversity Strategy	See response to Q7			No directly related target	Improving

Target 18	By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.				
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of change**

Target 19	By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.				
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of change**
Implementation of Italian Biodiversity Clearing House Mechanism		Web site on Italian Biodiversity	http://www.naturaitalia.it/home_en/index.html	Targets of working area 14	Improving
		National Biodiversity Network (NNB)	http://www.naturaitalia.it/home_it/biodiversita/conservare-la-biodiversita/nnb.html	Targets of working area 14	Improving
Studies and databases produced by MATTM and ISPRA	http://www.minambiente.it/pagina/pubblicazioni-e-banche-dati http://www.isprambiente.gov.it/it/pubblicazioni/publications_search?search_text=biodiversit%C3%A0&serie=&year=&submit=Cerca			Targets of working areas 1 and 14	Improving
2013: data base on CITES vascular plant taxa in to University botanical gardens		Recorded 1.591 taxa of which 1380 alien taxa e 206 autochthonous		Targets of working areas 1 and 14	Improving
Handbook on spontaneous Mediterranean species herbaceous for the redevelopment of anthropic environments	http://www.isprambiente.gov.it/en/publications/handbooks-and-guidelines/spontaneous-mediterranean-species-herbaceous-for-the-redevelopment-of-anthropic-environments.-state-of-the-art-weak-points-and-employment-opportunities?set_language=en			Targets of working areas 1 and 14	Improving
Syntaxonomic check-list: classes, orders and alliances in Italy	http://www.prodromo-vegetazione-italia.org/			Targets of working areas 1 and 14	Improving

Guidelines for the Translocation of Wild Plant species	http://www.isprambiente.gov.it/files/pubblicazioni/quaderni/natura-e-biodiversita/files/QUADConsNat_38.pdf			Targets of working areas 1 and 14	Improving

Target 20	**By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.**				
Italian contribution to global target		**Summary of change**		**Related national targets**	**Assessment of change**
Strategy for resource mobilization		Inter-ministerial Table on the Strategy for Resource Mobilization : 1. it was set up method based on international standard and it was quantified the national expense for biodiversity		No directly related target	Improving

Q11: WHAT HAS BEEN THE CONTRIBUTION OF ACTIONS TO IMPLEMENT THE CONVENTION TOWARDS THE ACHIEVEMENT OF THE RELEVANT 2015 TARGETS OF THE MILLENNIUM DEVELOPMENT GOALS IN YOUR COUNTRY?

The biodiversity conservation issue plays an important role also within the international cooperation politics implemented by Italy through the Directorate General for Development Cooperation (DGCS) of the Ministry for Foreign Affairs. In particular, the "Biodiversity" theme is carried out within the framework of DGCS environmental policies and initiatives.

As indicated in its Guidelines for 2011-13 planning, DGCS includes Environment both as one of the main areas of intervention and crosscutting theme.

Accordingly, the DGCS environment program has gradually developed and adopted over the years system-based methodologies aiming at not only reducing the risk of collision between the environmental conservation goals and those concerning the fight against poverty, but also the development opportunities offered by the environment.

This is reflected at policy level, in the DGCS Environment Guidelines, instrument approved in 2011 and intended to guide the elaboration and choice of cooperation initiatives in the “Environment” field, as well as to strengthen the integration of the environmental issue within non-environmental programs. The DGCS Environment Guidelines, which focus on the concept of sustainable development as fundamental objective for its intervention policy aimed at poverty eradication, identify the environmental mainstreaming as the primary means for the pursuit of the sustainable development target.

Therefore, also the DGCS "biodiversity" initiatives address sustainable development through a cross-sectorial not merely multi-disciplinary approach, by emphasizing as much as possible and in an objective way the connections between the three dimensions of sustainable development. Those are initiatives generally linked to more than one global and crosscutting theme/process, in accordance with the specific priorities for intervention of each geographical context.

In line with these principles, the Italian Cooperation has promoted over the years, besides the mutual integration of MDGs (and their desired evolution in SDGs, the mutual dialogue between the three Rio Conventions recognizing their systemic relevance and centrality as for the promotion of sustainable development at international level. This is also to stress that MDGs and Multilateral Environmental Agreements (MEAs) should be treated as parts of a sole development process and not as independent objectives.

The biodiversity conservation theme, therefore, fits in all major global processes promoted by the DGCS in the environmental field at both the programmatic and operational planning levels, with particular reference to the processes: Islands, Mountains and Transboundary.

With reference to Island Ecosystems, the DGCS has developed its own "Islands Global Strategy " which, through North-South and South-South exchanges for the transfer of know- how and technology, addresses the issue of development through the existent links between cross-cutting themes such as climate change, biodiversity conservation and management of transboundary protected areas. This has been done considering that: islands are the most vulnerable geographical entities to climate change adverse effects; in many islands in the distance from the mainland has resulted in the preservation of flora and fauna endemic character of global importance; and finally, that both marine protected areas at the border between independent island states represent privileged laboratories for the study of problems arising from the management of shared natural resources. For its "islands strategy" DGCS refers to the Global Island Partnership (GLISPA), whose achievements help the design and implementation of individual projects. GLISPA, which was born during the Mauritius Conference on Sustainable Development of Small Island States, is today recognized by CBD, CSD and GEF and is supported, besides Italy, by a number of other international partners (Governments, international organizations and NGOs).

As for mountain ecosystems, DGCS confirmed over the time great interest towards a global action for their protection and sustainable development with particular reference to those shared at the regional and /or transboundary level. This interest was enhanced by the adoption of *ad hoc* instruments by our Government, as the case of *Espace Mont Blanc* between Italy, Switzerland and France, as well as the Alpine Carpathian Conventions. Based on the experience gained in these contexts, DGCS contributed to the creation of a global instrument for the sustainable development of mountain areas, the Mountain Partnership (MP), which saw Italy as one of the founders and first active supporters. The MP, whose Secretariat is hosted by FAO, is an alliance created in recognition of the mountain ecosystems global role in providing strategic resources for development. The Partnership collects information, knowledge, best practices of its members in order to support the development and improvement of the conditions of people living in mountain areas and the protection of the mountain environment worldwide. Today it is one of the largest "type II partnership" for the number of members. Since the establishment of the Partnership, DGCS traced properly within its scope all the achievements of the environmental cooperation in mountain areas. As in the case of islands process, even in the mountain one a unified integrated approach facilitated the management of the correlations between the crosscutting issues such as climate change, biodiversity conservation and management of transboundary protected areas.

As for the transboundary protected areas issue, DGCS carried out a policy of support to the related international process, including that of peace parks. The issue was also treated in the context of the Rio+20 conference in a side event organized by DGCS on institutional mechanisms for the transboundary sustainable management and the implications which may arise in terms of green economy. The outcomes of the event were later presented and confirmed at the next IUCN World Conservation Congress.

With regard to debt conversion, the Italian Cooperation promoted the signing of several agreements for the beginning of programs for the protection of biodiversity and the

development of renewable energy. It is recalled, just to give an example, the agreement between Italy and Ecuador, signed by the two countries in June 2012, which provides for the conversion of a part of Ecuador's debt amounted to EUR 35 million against Italy in contribution to the Trust Fund established at UNDP. The Fund will have to manage the initiative for the protection of the Ecuadorian Yasuni Park in order to prevent the exploitation of oil in the Ecuadorian park, which is covered by about one million of hectares of forest, and considered as one of the planet's biodiversity. The Park has been also recognized as UNESCO Biosphere Reserve.

For information on DGCS projects classified on the basis of country and topic, please refer to the website: http://www.cooperazioneallosviluppo.esteri.it/pdgcs/italiano/iniziative/intro.asp.

Q12: WHAT LESSONS HAVE BEEN LEARNED FROM THE IMPLEMENTATION OF THE CONVENTION IN YOUR COUNTRY?

Drafting of this report offered the useful opportunity of scanning and resume, also with an eye to the half-term revision scheduled for 2015.

Particular care has been accorded to a multiscale approach of policies and instruments of conservation, in order to realize functions and coherent interventions and to give an answer to international commitments assumed by Italy.

Altogether it is possible to wrap up that Italy is strongly committed to, and is making significant progress to achieve all Aichi targets, with encouraging results as:

- Protected areas system is actually really wide-ranging. For the time being our engagement is directed in increase efficiency in managing system itself, with the aim to maximize biodiversity conservation, including connected ecosystem services;
- Make operational databases and dedicated portals; these are tools that make possible to steer policies, provide up to date figures in environmental assessment procedures, enhance and spread knowledge, and increase level of awareness on biodiversity.

Concerning the integration of biodiversity matters and ecosystem service in sectorial policies, several initiative have been undertaken, even if often not yet transposed in effective actions. Nonetheless there are some success stories in specific cases, or at local level.

A significant contribution to mainstreaming comes from the governance system include in National Strategy for Biodiversity, that aims to enhance cross-cutting approach, widening opportunities and procedures of spreading and communicating about significant initiatives on-going in our country. In this respect database availability is proving itself a useful source of information in order to underpin integration among different sectors, as well as to fine tune and assess values at national level.

Particular effort will be directed to verification and data population of status' and result' indicators, in order to improve the assessment of National Strategy.

Rich and diversified biodiversity of Italy force us to a tight timetable, that was certainly started, but that need of more efforts of synergic actions to achieve enduring positive results, well acknowledged even at international level.

APPENDIX I - INFORMATION CONCERNING THE REPORTING PARTY AND PREPARATION OF THE FIFTH NATIONAL REPORT.

The report was prepared by the Ministry for the Environment, the Land and Sea as CBD focal point, with the support of NBS Governance bodies that provided observations and contributions. The starting point for the elaboration of this report was the 1st Report on NBS 2011-12 implementation as well as the work carried out for the implementation of NBS indicators. Another important contribution arrived from all the reporting activities carried out in 2013 on the conservation status of habitats and protected species according to Habitats and Birds Directives and, more generally, from what Italy has been doing in relation to the European Strategy for the European Union biodiversity.

The experience gained was positive in comparison to the previous reports because of the presence of NBS and its governance bodies that allowed us to optimize the result as for both the time taken and the collection and sharing of information. Among the positive aspects, there is, on the one hand, the availability of a streamlined format designed to highlight the National performance with respect to the 2020 Strategic Plan, the Aichi Targets and the system of indicators; and, on the other hand, a preventive work done at national level to relate the objectives and actions of NBS, the European Strategy and Aichi Targets. The work of synthesis, which was required by the report, allowed to draw valuable insights for the mid-term review of NBS in 2015.

APPENDIX II - FURTHER SOURCES OF INFORMATION

Fondazione Symbola - Unioncamere, 2013 GreenItaly, 2013. [Online]. - http://www.symbola.net/assets/files/GREENITALY-2013_1383234863.pdf.

Genovesi P., Angelini P., Bianchi E., Dupré E., Ercole S., Giacanelli V., Ronchi F., Stoch F., 2014. Specie e habitat di interesse comunitario in Italia: distribuzione, stato di conservazione [Online]. - http://www.sinanet.isprambiente.it/it/Reporting_Dir_Habitat/rapporto/rapporto_2014_194.

Gherardi F., Bertolino S., Bodon M., Casellato S., Cianfanelli S., Ferraguti M., Lori E., Mura G., Nocita A., Riccardi N., Rossetti G., Rota E., Scalera R., Zerunian S. & Tricarico E., 2008. Animal xenodiversity in Italian inland waters: distribution, modes of arrival, and pathways. Biol. Invas., 10: 435-454.

MATTM, 2010. National Biodiversity Strategy. [Online]. - http://www.minambiente.it/sites/default/files/archivio/allegati/biodiversita/estratto_strategia_eng.pdf.

MATTM, 2013. I rapporto SNB (2011-2012). [Online]. - http://www.minambiente.it/sites/default/files/archivio/allegati/biodiversita/dpn_I_rapporto_snb_2011_2012.pdf.

Occhipinti-Ambrogi A., Marchini A., Cantone G., Castelli A., Chimenz C., Cormaci M., Froglia C., Furnari G., Gambi M.C., Giaccone G., Giangrande A., Gravili C., Mastrototaro F., Mazziotti C., Orsi-Relini L., Piraino S, 2010. Alien species along the Italian coasts: an overview. Biological Invasions, 13: 215-237. [Online]. - http://www.biologia.uniba.it/evo-amb/PhD_programs/publication/pdf/Corr_alien/2.%202010%20Occhipinti%20et%20al.%20NIS%20along%20Italian%20coasts%20BiolInv.pdf.

Rondinini C., Battistoni A., Peronace V., Teofili C. (eds.). 2013 Lista Rossa IUCN dei Vertebrati Italiani. Comitato Italiano IUCN e Ministero dell'Ambiente e della Tutela del Territorio e del Mare, Roma. [Online]. - http://www.iucn.it/pdf/Comitato_IUCN_Lista_Rossa_dei_vertebrati_italiani.pdf.

Rossi G., Montagnani C., Gargano D., Peruzzi L., Abeli T., Ravera S., Cogoni A., Fenu G., Magrini S., Gennai M., Foggi B., Wagensommer R.P., Venturella G., Blasi C., Raimondo F.M., Orsenigo S. (eds.), 2013. Lista Rossa della Flora Italiana. 1. Policy Species e altre specie minacciate. Comitato Italiano IUCN e Ministero dell'Ambiente e della Tutela del Territorio e del Mare. [Online]. - http://www.iucn.it/pdf/Comitato_IUCN_Lista_Rossa_della_flora_italiana_policy_species.pdf.

Zapparoli M., 2007 La componente alloctona nella entomofauna italiana. Atti Accademia Nazionale Italiana di Entomologia. Pagg 97-101. [Online]. - http://www.accademiaentomologia.it/rendiconti/2007/16%20Zapparoli.pdf.

Table 16. Web pages related to the activities of the Regions and Autonomous Provinces.

Region/Province	Natura 2000 Network	Regional Ecological Network	Regional Biodiversity Observatory
Provincia Bolzano	http://www.provincia.bz.it/natura-territorio/temi/natura-2000.asp		
Provincia Trento	http://www.areeprotette.provincia.tn.it/rete_ecologica_europea_Natura_2000/		
Regione Abruzzo	http://www.regione.abruzzo.it/xAmbiente/index.asp?modello=zpsSic&servizio=xList&stileDiv=mono&template=default&b=areeProt3		
Regione Basilicata	http://natura2000basilicata.it/	http://www.retecologicabasilicata.it/ambiente/site/portal/home.jsp	
Regione Calabria	http://www.regione.calabria.it/ambiente/index.php?option=com_content&task=view&id=193&Itemid=78	http://www.regione.calabria.it/ambiente/index.php?option=com_content&task=view&id=12&Itemid=29	http://31.195.173.235/webgis/index3.php
Regione Campania	http://www.regione.campania.it/portal/media-type/html/user/anon/page/HOME_DettaglioRegioneInforma.psml?itemId=4037&ibName=NotiziaHomePage&theVectString=-1		http://www.gestionefauna.com/orbc/
Regione Emilia-Romagna	http://ambiente.regione.emilia-romagna.it/parchi-natura2000/rete-natura-2000	http://ambiente.regione.emilia-romagna.it/parchi-natura2000/sistema-regionale/caratteristiche-sistema/rete-ecologica/rete-ecologica-regionale	http://ambiente.regione.emilia-romagna.it/parchi-natura2000/sistema-regionale/biodiversita/osservatorio/osservatorio
Regione Friuli Venezia Giulia	http://www.regione.fvg.it/rafvg/cms/RAFVG/ambiente-territorio/tutela-ambiente-gestione-risorse-naturali/FOGLIA203/	http://www.regione.fvg.it/rafvg/cms/RAFVG/ambiente-territorio/tutela-ambiente-gestione-risorse-naturali/	

Regione Lazio	http://www.regione.lazio.it/rl_ambiente/?vw=contenutiElenco&id=23	http://arplazio.it/pp~id-43+sx-+dx-+alto-+id_settore-3+id_pp-.htm	http://www.arplazio.it/pp~id-28.htm
Regione Liguria	http://www.natura2000liguria.it/	http://www.regione.liguria.it/opendata/dati-cartografici/item/34486-biodiversita-rete-ecologica.html	http://www.arpal.gov.it/index.php?option=com_flexicontent&view=items&cid=51&id=375&Itemid=371
Regione Lombardia	http://www.cartografia.regione.lombardia.it/sivas/jsp/documentazione/reteNatura.jsf	http://www.ersaf.lombardia.it/servizi/Menu/dinamica.aspx?idArea=17308&idCat=17991&ID=17991&TipoElemento=categoria	http://www.reti.regione.lombardia.it/cs/Satellite?c=Page&childpagename=DG_Reti%2FDGLayout&cid=1213602162505&p=1213602162505&pagename=DG_RSSWrapper
Regione Marche	http://www.ambiente.marche.it/Ambiente/Natura/ReteNatura2000/Marche.aspx	http://www.ambiente.marche.it/Ambiente/BiodiversitàereteecologicaBiodiversità/ReteEcologicaRegionale.aspx http://retecologica.ambiente.marche.it/pmapper/map.phtml http://sitbiodiversità.ambiente.marche.it/	http://www.parcogolarossa.it/index.php?option=com_content&view=article&id=108&Itemid=112&lang=it
Regione Molise	http://www3.regione.molise.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/657		http://www3.regione.molise.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/862
Regione Piemonte	http://www.regione.piemonte.it/parchi/cms/rete-natura-2000/rete-natura-2000-in-piemonte.html?lang=	http://webgis.arpa.piemonte.it/elenco_servizi/webgis_ecosis00.htm	http://arianna.consiglioregionale.piemonte.it/ariaint/TESTO?LAYOUT=PRESENTAZIONE&TIPODOC=LEGGI&LEGGE=19&LEGGEANNO=2009
Regione Puglia	http://ecologia.regione.puglia.it/index.php?option=com_content&view=article&id=716&Itemid=591	http://www.paesaggio.regione.puglia.it/index.php/lo-scenario-strategico/cinqueprogetti/reteecologica.html	

Regione Sardegna	amb.cons@regione.sardegna.it	amb.cons@regione.sardegna.it	http://www.regione.sardegna.it/documenti/1_274_20121120090744.pdf
Regione Sicilia	http://www.artasicilia.eu/old_site/web/natura2000/	http://www.siciliaparchi.com/_specialeTerritorioAmbiente1.asp?voce=E	http://www.arpa.sicilia.it/context.jsp?ID_LINK=92&area=5
Regione Toscana	http://www.regione.toscana.it/-/biodiversita-in-toscana-rete-natura-2000	**Errore. Riferimento a collegamento ipertestuale non valido.**	http://www.regione.toscana.it/documents/10180/392141/deliberazione1075_2011/3d52bdaf-953a-448c-9045-23ff3c00594a
Regione Umbria	http://www.biodiversita.regione.umbria.it/Mediacenter/FE/CategoriaMedia.aspx?idc=8	http://www.biodiversita.regione.umbria.it/Mediacenter/FE/CategoriaMedia.aspx?idc=12&explicit=SI	http://www.biodiversita.regione.umbria.it/mediacenter/FE/articoli/osservatorio-per-la-biodiversita.html
Regione Valle d'Aosta	http://www.regione.vda.it/risorsenaturali/conservazione/natura2000/default_i.asp	https://www.regione.vda.it/gestione/riviweb/templates/aspx/environnement.aspx?pkArt=502	http://www.vivavda.it/sistema_viva/osservatorio_i.aspx
Regione Veneto	http://www.regione.veneto.it/web/ambiente-e-territorio/i-siti-del-veneto		http://bur.regione.veneto.it/BurvServices/pubblica/DettaglioDgr.aspx?id=237132

ANNEX 1. CORRESPONDANCE AMONG SNB, AICHY TARGETS AND EUROPEAN UNION BIODIVERSITY STRATEGY.

In order to perform an analysis to verify correspondence with Aichi Biodiversity Targets and with targets contained in the European Union Biodiversity Strategy, given high grade of details and number of targets listed in NBS, these lattes have been grouped in "main targets", leaving unchanged the structure with 15 working areas (see Preliminary set of NBS indicators).

Table 17. Correspondence between Main targets in NBS, those included in Strategic Plan CBD (CBD SP) and those included in the European Union Biodiversity Targets (EU BS). T: target; A: Action.

CBD SP	EU BS	AREA DI LAVORO (SNB)	MACRO-OBIETTIVO (MO)
T19	T1A4; T2A5	1a. Species, habitats and landscape (species and habitat)	1.Deepen knowledge on number, characteristics and conservation status of habitats and species and on related ecosystem services; implement monitoring actions
T2; T4	T6A17	1a. Species, habitats and landscape (species and habitat)	2. Incorporate in legal provisions issues as habitat and species conservation, sustainable use of natural resources
T4; T5; T9; T14; T17	T1A1; T1A2; T2A7; T5A15; T5A16	1a. Species, habitats and landscape (species and habitat)	3. Implement dedicated policies aiming to pledge a satisfactory status of habitats and species conservation
T2; T4; T17	T2A6; T6A17	1b. Species, habitats and landscape (landscape)	4.Integrate legal provisions with landscape conservation issues, with specific reference to large and local scale action planning
T11	T1A1; T1A2;	2. Protected areas	5. Strenghten National PAs system
T16; T17	T6A20	3. Genetic resources	6.Achive CBD's third target in order to obtain a fair and equal benefit sharing derived from the use of genetic resources
T19		3. Genetic resources	7. Deepen knowledge on numbers, characteristics and conservation status of national genetic resources of fauna and flora
T13; T17; T18		3 Genetic resources	8. Implement policies aiming to the conservation of national genetic resources of fauna and flora

T2;T3; T5;T7; T8;T13;T14;T15;T17;T18	T3A8; T3A9; T3A10; T3A11; T3A12	4. Agriculture	9. Implement policies aiming to preserve and sustainably use agricultural biodiversity, to protect and to promote agricultural and forestry practices of high natural level
T19		5. Forests	10 Deepen knowledge on numbers, characteristics and conservation status of National forestry and undertake related monitoring activities
T2; T3; T4; T5; T7; T14; T15; T17	T2A7; T3A9; T3A11; T3A12	5. Forests	11. Implement policies aiming to protect forests, with particular reference to forest biodiversity, to carbon cycle and to ecosystem services
T2; T17		5. Forests	12. Develop adequate level of integrated planning between forestry, agriculture, environment, river basins an urbanistic.-infrastructural sectors.
T7; T17		5. Forests	13. Step up certification process for forestry, with particular reference to the two systems now operating in Italy (FSC and PEFC)
T19		6. Inland waters	14. Improve knowledge of water systems status, in order to better assess humane activities impact, and climate change effects on physical and biological processes.
T11; T14	T1A1	6.Inland waters	15. Protect at river basin scale inland water ecosystems, and related ecosystem services, making possible a sustainable use of water systems
T19	T4A13	7. Marine environment	16. Deepen knowledge on numbers, characteristics and conservation status of marine habitats and species, as well as on impacts deriving from humane activities
T4; T5; T6;T10; T11; T12; T14; T15	T4A14	7. Marine environment	17. Protect and preserve coastal and marine environment, tackling deterioration and biodiversity loss, and related ecosystem services; where possible maintain and/or restore good condition in marine ecosystems
T2; T3;T4;T6;T17	T4A13; T4A14	7. Marine environment	18 Ensure integration between biodiversity's need for costal and marine environment and economic and sectorial policies, with the aim to secure a sustainable use of resources
T2; T4	T6A17	8. Infrastructures and transports	19. Reduce impacts on biodiversity deriving from building and operating of infrastrucures, and to curb soil consuption
T2; T4;T17	T2A6; T6A17	8. Infrastructures and transports	20. Integrate in land planning policies related to mobility, infrastructures and transports, in order to achieve a simultaneous assessment of impacts on environment and biodiversity
T19		9. Urban areas	21Improve knowledge on ecological status of urban ecosystems
		9. Urban areas	22. Protect and preserve urban ecosystems
T2; T4; T17	T2A6; T6A17	9. Urban areas	23. Integrate in urban planning targets related to the conservation of biodiversity

		10. Health	24. Deepen knowledge of threats and impacts on health derived from change of biodiversity linked to climate change
		10. Health	25. Look after and manage in a sustainable manner plant and animal species in order to guarantee food security and therapeutic value
T17		10. Health	26. Integrate issues relevant for public health in programs and acctions aiming to preserve biodiversity
		10. Health	27. Prevent illness and diseases from biological imbalance
T2; T4	T6A17	11. Energy	28. Mitigate impact on biodiversity from energy supply
T2; T4; T17	T6A17	11. Energy	29. Integrate energetic policies with environment and land planning
T2; T4	T6A17	12. Tourism	30. Prevent and minimize impact on biodiversity and landscape from tourism, and to promote restoration initiatives
T2; T4; T17	T6A17	12. Tourism	31. Promote integration between conservation and sustainable use of biodiversity and development of tourism
T19		13. Reserch and innovation	32. Promote and back up scientific research on biodiversity and on functioning of ecosystems
T19		13. Research and innovation	33. Collect data on biodiversity by implementing the monitoring, in order to implement the related indicators
T1; T17	T1A3	14. Education, information, public awareness and shareholding	34. Reinforce education, information and communication role as public awareness tools from biodiversity matters
T17; T18		14. Education, information, public awareness and shareholding	35. Improve information, training and public awareness degree on importance of biodiversity among policy-makers, teachers and public manager.
T17; T20	T6A18; T6A19	15. Italy and world's biodiversity	36. Contribute to enhancing the effectiveness of international governance for biodiversity and ecosystem services, including through an increase in the financial resources allocated to projects that directly promote biodiversity and reduce the impact of interventions and of international trade on biodiversity and ecosystem services

ANNEX 2. INDICATORS USED IN THE FIFTH REPORT

http://www.minambiente.it/sites/default/files/archivio/allegati/biodiversita/snb_set_preliminare_indicatori_strategia.pdf

Table 18. Synopsis of the indicators used in the V Report.

Color	Trend
	no data/not evaluable
	Negative
	Stable
	Positive

Name of indicator	State indicator of SNB	Already used in the IV report	Web-link	Update	Trend
Agricultural land affected by the deliberate, for experimental purposes, of genetically modified plants	No	Yes		No more field trials in Italy	
Agricultural use of fertilizers (fertilizers, amenders, correctives)	No	Yes	Http://annuario.isprambiente.it/content/schedaindicatore/?V=10&id_ind=4201&id_area=D02&id_tema=T35	2011	
Agricultural use of plant protection products (herbicides, fungicides, insecticides, acaricides and various)	No	Yes	Http://annuario.isprambiente.it/content/schedaindicatore/?V=10&id_ind=4204&id_area=D02&id_tema=T35	2011	
Certification of sustainable forest management	No	Yes	Http://annuario.isprambiente.it/content/schedaindicatore/?V=10&id_ind=4320&id_area=D02&id_tema=T35	2012	
Contribution of national forests to the global carbon cycle	No	Yes		No longer updated, waiting for replacement	
Eco-efficiency in agriculture	No	Yes	Http://annuario.isprambiente.it/content/scheda-indicatore-no-tabs/?Id_ind=2127&id_area=D02&id_tema=T35&v=9	2010	

Ecological state of water body	Yes	No		Not yet implemented	
Ecological value of the territory according to “Carta della Natura”	Yes	No		2013	
Farms and utilized agricultural area	No	Yes	Http://annuario.isprambiente.it/content/schedaindicatore/?V=10&id_ind=4199&id_area=D02&id_tema=T35	2010	
Farms that have joined ecological approach and practicing organic farming	No	Yes	Http://annuario.isprambiente.it/content/schedaindicatore/?V=10&id_ind=4209&id_area=D02&id_tema=T35	2011	
Fisheries	No	Yes	Http://annuario.isprambiente.it/content/schedaindicatore/?V=10&id_ind=4291&id_area=A02&id_tema=T04	2012	
Forested areas: status and trends	Yes	Yes		2013	
Forest fires	Yes	Yes	Http://annuario.isprambiente.it/content/schedaindicatore/?V=10&id_ind=4300&id_area=A02&id_tema=T07	2012	
Hunting pressure	No	Yes		No longer updated, waiting for replacement	
Land use	Yes	Yes		2006	
Natura 2000 network	No	Yes		2013	
PREI (Posidonia Rapid Easy Index)- CW	Yes	No	Http://annuario.isprambiente.it/content/schedaindicatore/?V=8&id_ind=2091&id_area=A03&id_tema=T10	2010	
Relationship increase / forestry uses	Yes	No		Not yet implemented	
Size and level of threat of animal species	Yes	Yes		2013	
Size and level of threat of plant species	Yes	Yes		2013	
Spreading of alien animal and plant species	Yes	No	Http://annuario.isprambiente.it/content/scheda-indicatore-no-tabs/?Id_ind=1811&id_area=A02&id_tema=	2009	

			T04&v=7		
Surface of marine protected areas	No	Yes		2013	
Surface of protected land areas	No	Yes		2013	
Urbanization in coastal areas	Yes	No	Http://annuario.isprambiente.it/content/schedaindicatore/?V=10&id_ind=4313&id_area=A04&id_tema=T17	2009	
Water erosion	Yes	No	Http://annuario.isprambiente.it/content/schedaindicatore/?V=10&id_ind=4307&id_area=A04&id_tema=T15	2012	
Waterproofing and consumption of soil	Yes	No	Http://annuario.isprambiente.it/content/schedaindicatore/?V=10&id_ind=4366&id_area=A04&id_tema=T17	2009	
Wetlands of international importance	No	Yes	Http://annuario.isprambiente.it/content/scheda-indicatore-no-tabs/?Id_ind=2220&id_area=A02&id_tema=T06&v=9	2013	
Wood production	No	Yes	Http://annuario.isprambiente.it/content/schedaindicatore/?V=10&id_ind=4319&id_area=D02&id_tema=T35	2010	

ANNEX 3. UNESCO: ITALIAN CONTRIBUTION TO THE IMPLEMENTATION OF "AICHI TARGET"

In the progress Report presented at the 11th COP of the CBD, UNESCO has been identified among UN agencies called upon to make a contribution to the implementation of the "Aichi Target", as exemplified in the table below is from that document.

Table 19. From: "Box 1: Contributions of UN Agencies and Conventions to the Aichi targets" – in bold areas UNESCO.

Strategic Goal	Targets	UNESCO
Mainstreaming Biodiversity	**1: Aware of the values of biodiversity**	**o**
	2: Integration of biodiversity	**o**
	3: Elimination of incentives harmful to biodiversity	-
	4: Development and/or implementation of plans for sustainable production and consumption	**o**
Reducing pressure on biodiversity	**5: Halving the rate of loss of all natural habitats**	**o**
	6: All fish and invertebrate stocks and aquatic plants are managed and	-
	7: Areas under agriculture, aquaculture and forestry are managed sustainably	**o**
	8: Reducing pollution	-
	9: Invasive alien species and pathways are identified and prioritized	-
	10 (2015): Minimize the anthropogenic pressures on coral reefs, and other vulnerable ecosystems	**o**
Safeguarding ecosystem	**11: Conservation of terrestrial and marine areas.**	**o**
	12: Prevent extinction of known threatened species	**o**
	13: Minimizing genetic erosion and safeguarding genetic diversity.	**o**
Enhancing benefits from biodiversity and ecosystem	**14: Restoring and safeguarding ecosystems**	**o**
	15: Enhanced ecosystem resilience	**o**
	16: Implementation of Nagoya Protocol on Access to Genetic Resources (...)	**o**
Enhancing implementation	17: Implementation of national biodiversity strategy and action plan	-
	18: Traditional knowledge, innovations and practices of indigenous and local communities respected	**o**
	19: Knowledge, the science base and technologies relating to biodiversity, improved	**o**
	20: Mobilization of financial resources	-

Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably

The Italian 9 Biosphere Reserves developed specific products for the dissemination and awareness about biodiversity both within their core and buffer areas (i.e. their protected areas at the nucleus of a MAB site) and their transition areas (whose surface

goes beyond the PAs boundary, including productive territories as well as medium sized cities. In this framework the Italian Biosphere Reserves developed educational and Information materials – addressing respectively primary or secondary schools, and the general public (with tools such as website, newsletters and social media) – and tourist information (e.g. brochures) about the values natural and biodiversity recognized by UNESCO. The same actions were meant to raise awareness and knowledge of biodiversity, nature conservation and sustainable development among the different stakeholder groups (Authorities, NGOs, private sector and so on) participating to everyday Biosphere Reserve policies and projects.

Target 2: By 2020, at the latest, biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.

The Italian 9 Biosphere Reserves – as well as the nominated sites to the World Network of Biosphere Reserves – developed, or are currently developing, formal partnership with the regional Authorities in order to take in consideration their territories as experimental sites for the regional plans and projects and, in some cases, to include their perimeter within the regional legal system. Through the mechanisms of participation developed within any Biosphere Reserves, these Italian MAB sites represent themselves therefore ad hoc tools to test and strengthen alternative approaches for the sustainable use of natural resources and to guide the local planning on biodiversity values.

As mentioned in the (Italian) National Biodiversity Strategy Report 2011-2012, the proposed new Biosphere Reserve represent a very important initiative for its aim at linking natural values and sustainable development. On January 2012 the Ministry for Environment reconstituted the Italian National MAB Committee gathering together the representatives of key Administrations at central level (such as the Ministry for Agriculture Food and Forestry, the Ministry for Education, University and Research, the Center of National Research, the State Forestry Corps and so on) on biodiversity management and research planning, as well as local Administration, research Institutes, Universities, Institutes and experts.

The multidisciplinary approach of the Italian National MAB Committee reflected the new proposals to the World Network of Biosphere Reserves and their way to involve public and private stakeholder in their nomination process and within the activities developed at local level. The Sila National Park for example, and the local Authorities involved out of the park (over a total of 357,294 ha of proposed Biosphere Reserves, the transition areas identified around the National Park consist of 290,933 ha) developed its nomination process in order to test new development strategies, strictly linked with the preservation of the natural diversity of a larger territory than the park and to harmonize long term socio economic development planning with the preservation of the natural resources.

Target 7: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.

Further the proposed Biosphere Reserve is carrying a project aiming at setting the Sila as a hub for the forest wood and for the application of innovative technologies with high environmental sustainability in the forest-wood-energy production chain among activities of research and development. As part of the National Operational Programme "Research and Competitiveness 2007/2013, Axis I support to structural changes - High Technology Districts and related public-private networks and workshops", in May 2012 the Ministry for Education, University and Research deemed eligible a project that aims to implement development and research activities promoted within the forest-wood-energy production chain in the territory of the proposed Biosphere Reserve with the creation of an "interdisciplinary public-private workshop".

Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

In January 2013 new forms have been approved by the MAB Programme both for the nomination within the World Network of Biosphere Reserve and the periodic review for the sites inscribed since 10 years, introducing a set of indicator for the 3 typical Biosphere Reserve functions (conservation, sustainable development and logistic support). Within these activities, Italy nominated 4 new sites and presented 1 new periodic report on September 2013 which developed at local level indicators to evaluate the effectiveness and representativeness of the PAs included in their proposed territory.

Target 12 By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.

Core areas of Italian Biosphere Reserves, as well as the Italian World Natural Heritage Sites (as Mount Etna in 2013) are meant to locate and monitoring the status of conservation of the threatened species. Further, in 2012/2013 a Transboundary Biosphere Reserve between Italy and France – the “Monviso” – was inscribed within the World Network of the MAB Programme after the effort carried out to integrate the management of 2 PAs (Parco del Po Cuneese and Parc National Régional du Queyras) as well as the conservation activities for the Alpine ecological corridor at regional level.

Target 18: By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the

implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.

The new forms adopted in January 2013 by the MAB Programme for the nomination of the Biosphere Reserve and the periodic review exercise include also some paragraphs aiming at the describing how "traditional and local knowledge and knowledge from relating to management practices have been collected, synthesized and disseminated".

Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

Within the Italian Network of Biosphere Reserve, the Ministry for the Environment is supporting – together with the Italian National MAB Committee members, the BRs managers and representatives of the new BR proposals, and with the technical contribution by the Federparchi Association – a project aiming at collecting – through a website platform – initiatives, experiences, know how, project proposals and best practices amid the Italian MAB sites, in order to further enhance their role of these sites as territorial drivers for protection, research, educational and training actions on the ground.

UNESCO recognition 2009-2013

Concerning national and sub-national protected areas, in UNESCO framework, Italy obtained in told period:

- Two more sites for natural criteria in World's Natural Heritage (Convention of 1972): Dolomites (2009) and Mount Etna (2013), moreover the expansion of Mount San Giorgio (2010), whose territory however is not coinciding with a PA.
- The inscription a new site for World's Biosphere reserve (Intergovernamental program 1971) Mount Monviso (2013).
- Expansion of five Reserves of Biosphere (Cilento e Vallo di Diano, Circeo, Collemeluccio-Montedimezzo, Miramare, Valle del Ticino) in the framework of the periodic review process.

In period 2009-2013 has been registered a total increase (at land and at sea) of UNESCO sites (World's heritage sites and Biosphere reserve) of more than 25%, from 3,007,652 ha to 3,764,385 ha (Table 20).

Table 20. Variation 2009-2013: ha in Italy recognized by UNESCO.

UNESCO Italian sites		*Italian International initiative (2009/2013)*	*Italian surface in ha*	
site	*recognition*		*31 March 2009*	*31 March 2014*
Eolian island	World's natural heritage (2000) Criterion viii		1.216	1.216
Dolomites	World's natural heritage (2009) Criteria vii,viii	New site inscription	-	141.903
Mount Etna	World's natural heritage (2013) Criteriom viii	New site inscription	-	192.370
Monviso's Biosphere Area	Reserve of Biosphere (2013)	New site inscription	-	293.917
Cilento and Vallo di Diano	Reserve of Biosphere (1997)	Expansion through periodic review (2012)	181.000	395.503
Circeo	Reserve of Biosphere (1977)	Expansion through periodic review (2012)	8.500	8.760
Collemeluccio-Montedimezzo	Reserve of Biosphere (1977)	Expansion through periodic review (2012)	637	25.268
Miramare	Reserve of Biosphere (1979)	Expansion through periodic review (2012)	290	3.060
River Ticino basin	Reserve of Biosphere (2003)	Expansion through periodic review (2012)	97.140	153.729
Somma-Vesuvio and Miglio D'Oro	Reserve of Biosphere (1997)		13.550	13.550
Arcipelago of Tuscany	Reserve of Biosphere (2003)		264.800	94.590
Selva Pisana	Reserve of Biosphere (2004)		2.440.519	2.440.519
TOTAL ha			**3.007.652**	**3.764.385**

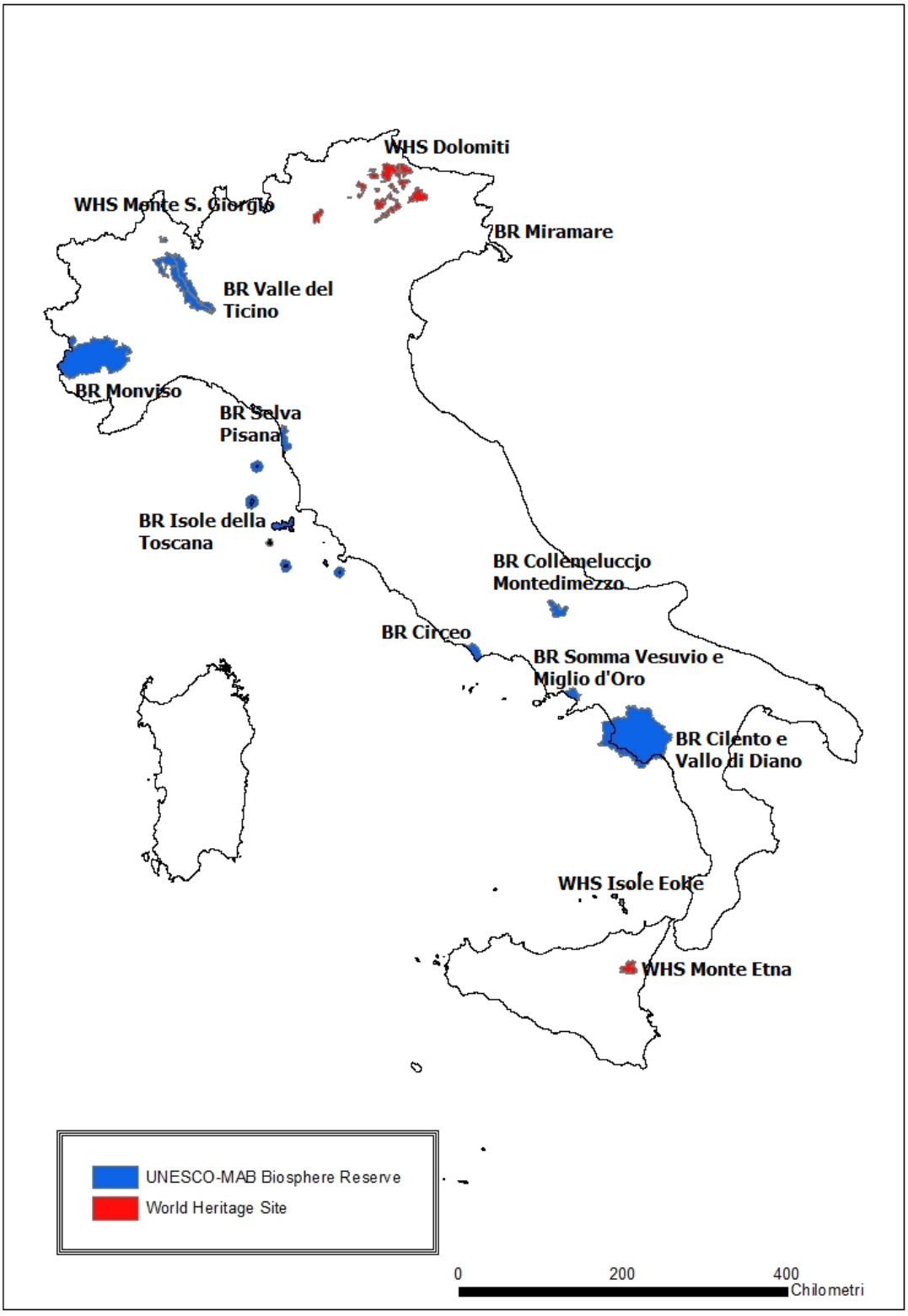


Figure 20. UNESCO sites.