Annex I to the Biosphere Reserve Nomination Form, January 2013

MABnet Directory of Biosphere Reserves

Biosphere Reserve Description[1]

Administrative details

Country:

ITALY

Name of BR:

Ticino Val Grande Verbano

Year designated: (*to be completed by MAB Secretariat)*

Administrative authorities:

The promoters of the candidacy are the Parco Lombardo della Valle del Ticino and Ente di gestione delle aree protette del Ticino e del Lago Maggiore, current managing bodies of the Biosphere Reserve Valle del Ticino and the Parco Nazionale della Val Grande.

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Telephone: 0321 517706
E-mail: parcoticinolagomaggiore@pec-mail.it
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Name: PARCO LOMBARDO DELLA VALLE DEL TICINO
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Telephone: 02 972101
E-mail: parco.ticino@pec.regione.lombardia.it
ufficiomab@parcoticino.it
Web site: http://www.parcoticino.it/

Name: PARCO NAZIONALE VAL GRANDE
Street or P.O. Box: Piazza Pretorio, 6
City with postal code: 28805 VOGOGNA (VB)

[1] To be posted on the MABnet once the nomination has been approved. The numbers refer to the relevant sections of the nomination form.

Country: ITALIA
Telephone: 0324 87540
E-mail: info@parcovalgrande.it
Web site: http://www.parcovalgrande.it/

Related links:

Currently, the Candidate Biosphere Reserve uses pre-existing thematic channels, in particular dedicated pages on the sites of two park bodies that manage the Riserva Valle del Ticino (Parco Lombardo della Valle del Ticino www.parcoticino.it; Ente di gestione delle aree protette del Ticino e del Lago Maggiore http://www.parcoticinolagomaggiore.it/).
The proposed promotion of the territory to reserve status, and the involvement of new institutional entities will be followed by the creation of a dedicated website at the positive outcome of the candidature.

Social networks:

The Ticino Valley Biosphere Reserve has its own page on Facebook @BiosferaValleTicino. Information about the Reserve, its activities, and in general about the Parks involved, is also communicated via each park's own Facebook pages.
This channel is also used to disseminate information about the existing Reserve and to provide updates on the current application.

Description

General description:

The "Valle del Ticino" Regional Park is one of the largest river parks in Europe, and includes a mosaic of natural ecosystems typical of the great rivers, since it conserves substantial remains of the primary plains forest, which covered the whole plain of the Po before Roman colonization.
From an ecological and biogeographic point of view, the Ticino River Valley is an extraordinary biological corridor, through the urbanized plain, between the two mountainous systems of the Alps and the Apennines.

Are already included in the Riserva area some land-water transitions linked to Lake Maggiore that with this application is totally included along its shores, Lombardy and Piedmont, characterized by mixed landscapes, villas, second homes with gardens ornamental, trails and equipment for the loisir.
The expansion of the Reserve will strengthen the importance of the Ticino corridor within its catchment area, including environments and ecosystems that concern: in Piedmont territory at the Val Grande, now national park, and adjacent valleys the Verbano and the Ossola, still characterized by morphologies of the landscape of anthropic origin, once cultivated, with half-coast settlements overlooking "balconies" towards lakes and valleys; in Lombardy to the Varese lakes, to the morainic hills of Varesotto, to the massive mountains of Campo dei Fiori and Martica-Chiusarella (with their karst system) and, near the Swiss border, to the first alpine reliefs and valleys: Valcuvia, a wide and open valley, surrounded by hidden towns among beech and chestnut woods, and the Val Veddasca is the northernmost part of Varesotto, and is still present as a lonely and wild valley, with remarkable testimonies of rural culture Alpine foothills. Fully lined by the Giona stream, which from Mount Tamaro goes down to Lake Maggiore, there is no communication path between the two sides.
The resident population in the biosphere reserve is equal to 1,082,196 people (source ISTAT (Consumer Price Index) data http://dati.istat.it/Index.aspx?DataSetCode=DCIS_POPRES1).

The biosphere reserve candidate includes 217 municipalities, of which 168 are small municipalities with fewer than 5,000 inhabitants, equal to 77% of the total. There are no particularly populous cities; the largest is Varese with slightly fewer than 81,000 inhabitants.

Major ecosystem type:
Several ecosystems, landscapes and land cover co-exist in this Biosphere Reserve, including 42 habitats of Community interest, of which 8 are priority habitats The candidate reserve embraces a wide latitudinal belt of land extending from the Po River to the Swiss border, and covers altitudes ranging from the Padana Plain to the heights of the Lepontine Alps.

A stretch of the River Po, the entire course of the Ticino River from Lake Maggiore to the Po, the Toce River, and many other water courses, such as the Olona, as well as the prealpine lakes, characterize the candidate reserve, with an abundance and variety of water sources and their associated environments.

There are also mesophilic and xerofile formations, and geological and climatic diversity contribute to the richness of the territory's great biodiversity.

Major habitats & land cover types: (11.6)

The principal types of land cover (taken from the Goeportale Nazionale Land Use, Corine Land Cover vectorial data 2012) is reported in the following table referring to Level I.

CORINE Land Cover	**surface (ha)**	**percentage**
Artificial Surfaces	40,299	12.1%
Agricutural areas	114,483	34.5%
Forests and semi-natural areas	154,887	46.6%
Wetland	524	0.2%
Water bodies	21,970	6.6%
Total	**332,163**	

It can be noted that the prevailing land cover is "Forests and semi-natural areas", followed by "Agricultural Areas", representing 81% of the total surface of the reserve.

The environments comprising these areas are highly diversified: wetlands, fluviale and riparian ecosystems with willow groves (Salicion albae) and alder woods (Alnion glutinosae), wooded ravines like the Tilio-Acerion forests, woody riparian vegetation of Salix eleagnos, phragmite wetlands, recognized internationally under the Ramsar Convention (the Palude Brabbia marsh); thermophilous habitats, including oakwoods of Quercus pubescens, thermophilic beech woods of the Cephalantero-Fagion type, in the forests and arid plains on calcareous substrates (Festuco-Brometalia).

Bioclimatic zone (11.5)

The Candidate Biosphere Reserve falls within the humid-subhumid and perhumid areas.

Location (latitude & longitude): (6.1)

Cardinal points:	**Latitude (decimal degrees)**	**Longitude (decimal degrees)**
Most central point:	45.73072	8.65439
Northernmost point:	46.24947	8.44428
Southernmost point:	45.10614	9.21883
Westernmost point:	46.17831	8.19631
Easternmost point:	45.15816	9.28855

Total Area (ha): (7) 332.163 ha
Core area*(s)*: (7) 17.964 ha
Buffer zone*(s)*: (7) 51.573
Transition area*(s)* : (7) 262.626 ha

Different existing zonation:

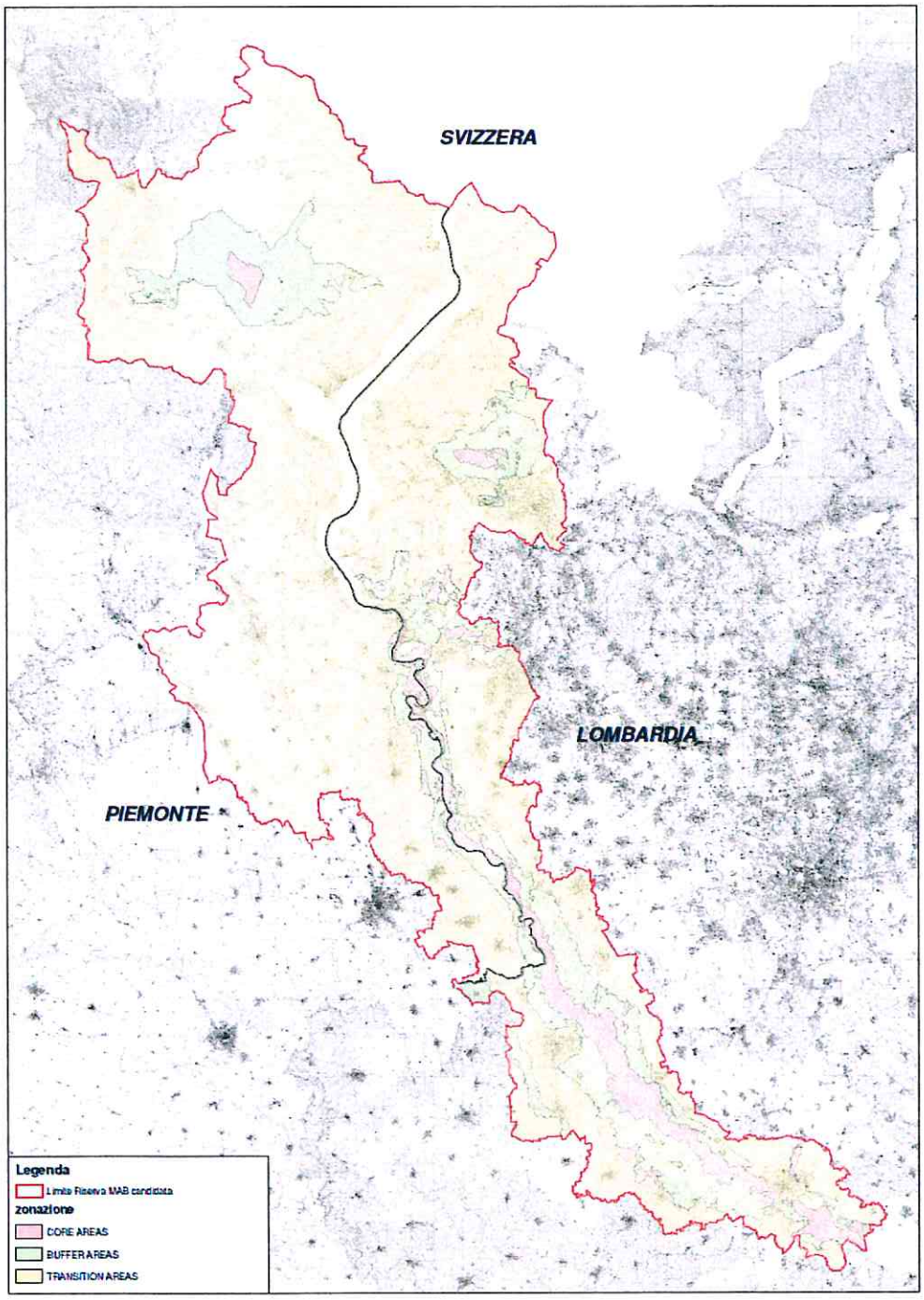
The proposed zoning, to be congruous with the current condition of the territory involved, requires on the one hand that the system as a whole be capable of fulfilling the three functions provided for in the MAB programme (conservation, sustainable development and logistics), and on the other hand that this can be implemented in accordance with an integrated approach between existing constraints and the potential of the territory.
The proposed zoning is congruent with the present state of the territory involved, on the one hand the system as a whole fulfills the three functions envisaged in the MAB program (conservation, sustainable development and logistics) and on the other it takes into account an approach integrated between constraints existing and the potential of the territory.

Therefore, areas with higher levels of protection were identified with the tools in force, and the function of "core" areas of the reserve were attributed in accordance with the MAB objectives, thus simultaneously guaranteeing the reserve's zoning characteristic and the linking of the territory's administrative tools.
Once the territory's reserves were identified, an analysis of the other objectives of the protected area plans was carried out. Insofar as the plans regulate protection and permitted activities they are related to the purpose of the MAB buffer areas. This allowed the drawing up of all the new concentric buffer areas around the core areas in a consistent and functional manner starting with the development in the plans of zoning, the subdivision of territory and nullifying of the role of "islands" in the core areas.

Lastly, the deliberately large transition area was defined primarily on the basis of shared and/or previous plans, starting from an area including the large Ticino-Lake Maggiore catchment basin, an important intersection for water resources (and management of the numerous ecosystem services offered), for ecological links between the alpine and continental bioregions (and the Apennines) within a heavily compromised context such as the Po Valley and due to the integrated historical and landscape characteristics and the already mentioned institutional and social planning – both volunteer and not – in the area.

Altitudinal range *(*metres above sea level):
The highest and lowest elevations are located at the North-West and South-East limits of the Reserve. The highest elevation is found at Pizzo Giezza (in the Municipality of Domossola) while the lowest is on the Ticino River between Pavia and Travacò Siccomario.

Zonation map(s): (6.2)



Main objectives of the biosphere reserve

The area of the reserve, with the stewardship and conservation activities that the parks have carried out for decades, has experience of effective territorial and landscape governance, that can be exported outside of its confines.

The objective of the candidate reserve is The objective of the candidate reserve is to configure itself as a testing laboratory for a number of innovative, sustainable activities and practices, functioning as a driving force of new economic and social models, with an active and proactive role as well, in territory situated outside the officially recognized Protected Areas.

Research and Monitoring

Active monitoring and research on various environmental components within the territory of the Reserve Candidate has been carried out for decades and today allow for a set of data and indicators that characterize the biotic and abiotic components of the Reserve, and which will form the basis and the foundation for the development of the Reserve Management Plan itself.
The aim of the Reserve Candidate is therefore to create a network and systemize this base of knowledge and information in order to promote an integrated and balanced management of environmental resources, by also involving stakeholders in the area, each bringing to the table their own experiences and expertise, and with more diffused and effective forms of communication.
Most of these study and research projects are concentrated in the park's core and buffer areas, but interesting research is also being conducted outside these areas, which is extremely important and functional for an overall view of the issues, and for the elaboration of 'large-scale strategy.

In particular, the presence and role of the following structures must be mentioned:
1) CNR Institute for the Study of Ecosystems (CNR-ISE) of Verbania Pallanza
2) Joint Research Center in Ispra (VA)
3) University of Insubria
4) Regional ARPA.

Specific variables (fill in the table below and tick the relevant parameters)

Abiotic		Biodiversity	
Abiotic factors	x	Afforestation/Reforestation	x
Acidic deposition/Atmospheric factors	x	Algae	x
Air quality	x	Alien and/or invasive species	x
Air temperature		Amphibians	x
Climate, climatology		Arid and semi-arid systems	
Contaminants	x	Autoecology	x
Drought	x	Beach/soft bottom systems	
Erosion	x	Benthos	x
Geology		Biodiversity aspects	x
Geomorphology		Biogeography	x
Geophysics		Biology	x
Glaciology		Biotechnology	
Global change	x	Birds	x
Groundwater	x	Boreal forest systems	
Habitat issues		Breeding	
Heavy metals		Coastal/marine systems	
Hydrology	x	Community studies	x
Indicators	x	Conservation	x
Meteorology		Coral reefs	
Modeling	x	Degraded areas	x
Monitoring/methodologies	x	Desertification	
Nutrients		Dune systems	
Physical oceanography		Ecology	x
Pollution, pollutants		Ecosystem assessment	x
Siltation/sedimentation		Ecosystem functioning/structure	x
Soil	x	Ecosystem services	x
Speleology	x	Ecotones	x
Topography		Endemic species	x
Toxicology	x	Ethology	x

UV radiation		Evapotranspiration	x
		Evolutionary studies/Palaeoecology	
		Fauna	x
		Fires/fire ecology	x
		Fishes	x
		Flora	x
		Forest systems	x
		Freshwater systems	x
		Fungi	x
		Genetic resources	x
		Genetically modified organisms	
		Home gardens	
		Indicators	x
		Invertebrates	x
		Island systems/studies	
		Lagoon systems	x
		Lichens	x
		Mammals	x
		Mangrove systems	
		Mediterranean type systems	
		Microorganisms	x
		Migrating populations	x
		Modeling	x
		Monitoring/methodologies	x
		Mountain and highland systems	x
		Natural and other resources	x
		Natural medicinal products	x
		Perturbations and resilience	x
		Pests/Diseases	
		Phenology	
		Phytosociology/Succession	x
		Plankton	
		Plants	x
		Polar systems	
		Pollination	x
		Population genetics/dynamics	x
		Productivity	x
		Rare/Endangered species	x
		Reptiles	x
		Restoration/Rehabilitation	x
		Species (re) introduction	x
		Species inventorying	x
		Sub-tropical and temperate rainforest	
		Taxonomy	x
		Temperate forest systems	x
		Temperate grassland systems	x
		Tropical dry forest systems	
		Tropical grassland and savannah systems	
		Tropical humid forest systems	
		Tundra systems	
		Vegetation studies	x
		Volcanic/Geothermal systems	

		Wetland systems	x
		Wildlife	x

Socio-economic		Integrated monitoring	
Agriculture/Other production systems	x	Biogeochemical studies	
Agroforestry	X	Carrying capacity	
Anthropological studies		Climate change	x
Aquaculture		Conflict analysis/resolution	
Archaeology	X	Ecosystem approach	x
Bioprospecting		Education and public awareness	x
Capacity building	x	Environmental changes	x
Cottage (home-based) industry		Geographic Information System (GIS)	x
Cultural aspects	x	Impact and risk studies	
Demography	x	Indicators	
Economic studies		Indicators of environmental quality	x
Economically important species	x	Infrastructure development	x
Energy production systems		Institutional and legal aspects	
Ethnology/traditional practices/knowledge	x	Integrated studies	x
Firewood cutting		Interdisciplinary studies	x
Fishery	x	Land tenure	
Forestry	x	Land use/Land cover	x
Human health		Landscape inventorying/monitoring	x
Human migration		Management issues	
Hunting		Mapping	
Indicators		Modelling	
Indicators of sustainability	x	Monitoring/methodologies	
Indigenous people's issues		Planning and zoning measures	
Industry		Policy issues	
Livelihood measures		Remote sensing	x
Livestock and related impacts		Rural systems	x
Local participation	x	Sustainable development/use	x
Micro-credits		Transboundary issues/measures	x
Mining		Urban systems	x
Modelling		Watershed studies/monitoring	
Monitoring/methodologies			
Natural hazards	x		
Non-timber forest products	x		
Pastoralism	x		
People-Nature relations	x		
Poverty			
Quality economies/marketing			
Recreation	x		
Resource use	x		
Role of women	x		
Sacred sites			
Small business initiatives	x		
Social/Socio-economic aspects	x		
Stakeholders' interests	x		
Tourism	x		
Transports			