

International Conference
Old-Growth Forests and Ancient Trees
A Treasure of Nature, Life and Culture



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Florence, 1 October 2025; Vallombrosa, 2 and 3 October 2025

It is not so much for its beauty that the forest claims men's hearts, as for that subtle something, that quality of air that emanation from old trees, that so wonderfully changes and renews a weary spirit.
(Robert Louis Stevenson)

We do not inherit the Earth from our ancestors; We borrow it from our children. Trees are the pillars of the world; when the last trees are cut, the sky will fall"
(Sioux proverb)

Keywords

Carabinieri Forestry, Environmental, and Agri-Food Unit Command, Old-growth forests, ancient trees, biodiversity, nature conservation, longevity of trees, threatened species, sustainability, sacred forests, spirituality of old-growth forests, humans and forest, the forest in art and music, old-growth forests and well-being, One Health.

Value and meanings of old-growth forests

Old-growth forests are unique ecosystems, characterised by a high structural and functional heterogeneity, with characteristics that develop over decades and centuries.

Forests are, therefore, of exceptional and irreplaceable importance. Where anthropogenic disturbance is absent or negligible, they give home to a unique characteristic flora and fauna. They also represent valuable carbon stores and are essential for studying the impacts of climate change in areas where the influence of human activities is negligible.

Since the 1980s, Italy's cultural and scientific attention to these formations has progressively increased. An initial census carried out within the National Parks revealed that about 70 forests emerged with characteristics of antiquity. Also, in many areas outside the protected areas, strips of forests are no longer used or specifically not used to preserve their natural evolution.

In recent years, thanks to the European and National Forest Strategy and the Consolidated Law on Forests, the 'National Network of Old-Growth Forests' was established in April 2023, with the direct contribution of the Italian Regions. All this is also because Italy is currently one of the countries that, at the European level, has included in the continental network of old-growth forests many examples of forests linked to the complex wealth of tree species, including endemic ones, that characterise the Mediterranean biochora.

The protection of biodiversity promoted by the Convention on Biological Diversity (CBD), the Nature Restoration Plan promoted by the European Regulation, and the implementation of the national network of old-growth forests will further increase old-growth forests worldwide.

Of great importance is also the attention that UNESCO has paid to these extraordinary ecosystems, including the transnational site of the "Ancient Primordial Beech Forests of the Carpathians and other regions of Europe" in the World Heritage Site. This site spans 18 European countries, with 13 sites in Italy, most of which are located within Nature Reserves or State-owned Areas managed by the Carabinieri Biodiversity Group.

Old-growth forests also have significant cultural value because they reconnect us with primordial forests and a thousand-year history of human coexistence. They also represent profoundly spiritual places where the grandeur of unspoiled nature leads human beings to reflect on their being and their relationship with creation.

They represent, therefore, the open book in which to read about the intimate essence of ecosystems, and the alternating and complex relationship between natural evolution and anthropogenic impact. Their history has its roots in that of the countries that host them, often accompanying their growth.

So, they deserve a systemic, interdisciplinary, and transdisciplinary approach that provides tools to reach people's hearts and minds as a lever of awareness and

responsibility, through different perspectives that lead us towards a better understanding of these extraordinary ecosystems through different interpretative keys:

1. **Naturalistic**, because they are home to a characteristic flora and fauna linked to the strict lack of anthropogenic disturbance.

2. **Ecological and climatic**, because they are precious carbon deposits, and are fundamental for studying the impacts of climate change in contexts with prevalent natural dynamism in areas free from human activities.

3. **Silviculture**, because the absence of direct anthropogenic influence allows the study of natural dynamics and offers valid elements for developing naturalistic forestry and sustainable management of forest resources.

4. **Cultural and spiritual**: Old-growth forests have significant cultural value, reconnecting us with a multi-millennial human history of coexistence.

Finally, the tenth anniversary of the most important encyclical dedicated by the Catholic Church to the protection of creation, "Laudato Si," together with the start of the celebrations for the eight hundredth anniversary of St. Francis of Assisi's death and the eight hundredth anniversary of the writing of his Canticle of the Creatures, can represent further food for thought of great value.

The International Conference

The International Conference "Old-Growth Forests and Ancient Trees: A Treasure of Nature, Life and Culture", organized by the Carabinieri Forestry, Environmental, and Agri-Food Unit Command, aims to respond to the above solicitations, thanks to experts in nature, forestry, human and social sciences, as well as representatives of different religious faiths, artists and writers, convened from all over the world. The aim is to create a dialogue and a synthesis of approaches and languages around the universal value of old-growth forests, without neglecting the aspect of dissemination with a high emotional and communicative impact.

The places.

The conference will be "itinerant". The opening of the Works, the introductory and the first sessions will be held in Florence, home of the first Italian Faculty of Forestry Sciences and the Academy of the same name.

The conference will continue, the following day, in Vallombrosa (Reggello – FI) which, due to the presence of the millenary forest, cared for over a century by the Carabinieri Forestali, of the most imposing and ancient Italian experimental arboretums and of the majestic Benedictine Abbey, represents the ideal junction point between all the topics covered in the Conference.

In particular, the Forest and the extraordinary Abbey result from the wisdom of the Vallombrosa monks, descendants of San Giovanni Gualberto, who have made Vallombrosa their spiritual home for a thousand years. Subsequently, with the presence of the first national forestry institutions, already at the time of Florence as the capital of Italy, this extraordinary location, with its wonderful forest, has become the historical, cultural and spiritual reference of all the foresters of Italy, loved and cited by Italian and foreign poets and writers such as George Perkins Marsh, founder of

scientific ecology and the first ambassador of the United States to Italy, who died in Vallombrosa in 1882.

The programme

The conference will be divided into a general introductory session, four thematic sessions, and four side events to address the topics covered.

The central theme will be old-growth forests, a priceless heritage of natural and cultural values, which will be analysed from multiple perspectives.

After the institutional greetings of the numerous and important civil, military and religious authorities involved, the conference will begin with an in-depth *overview* of all the issues related to "old-growth forests" through a specific recognition of these particular environments' cultural and ecological centrality. The four sessions and four *side events* that will take place during the three days of work will be dedicated to the in-depth study of different aspects -naturalistic, ecological, climatic, silvicultural, cultural and spiritual-, with the desire to obtain messages and indications for future actions of protection and enhancement and to immerse ourselves (first metaphorically and then really, in the forest of Vallombrosa) in the magical environment that only old-growth forests are capable of creating.

PROGRAMME

1st October - Florence – Palazzo Vecchio, Salone dei 500

9:30-10:00 *Registrations*

10:15 *Institutional greetings*

Chair

Mario Calabresi, *Journalist and writer*

10:45 *Opening Speech*

Cardinal Fabio Baggio, *Director General of the Laudato Si' Higher Education Centre*
Ethics and Spirituality of Old-Growth Forests 10 Years after Laudato Si'

11:15 – *Coffee Break*

11:30 *Introductory Session*

A Global Overview of Patterns and Processes in Old-Growth Forests

In this introductory session, the scientific approach to old-growth forests will be addressed through the four points of view representing the main themes. The four sessions will focus on naturalistic, ecological-climatic, silvicultural, cultural, and spiritual issues.

Chair

Carlo Blasi, *Emeritus Professor of plant ecology, Sapienza University of Rome and Scientific Director of the Interuniversity Research Center "Biodiversity, Ecosystem Services, and Sustainability" (CIRBISES)*

Pierluigi Sassi, *President of Earth Day Italy*

David Lindenmayer, *Distinguished Professor of Ecology and Conservation Biology at the Fenner School of Environment and Society of the Australian National University (Canberra, Australia)*

The role of old-growth forests and ancient trees in landscape restoration

Paula J. Ehrlich, *President & CEO of the E.O. Wilson Biodiversity Foundation (Durham, NC, USA)*

Reimagining the way we care for our planet: Promoting biodiversity conservation through the hopeful vision of the Encyclical Laudato Si' and Half-Earth

Sandra Diaz, *Professor of Ecology at the National University of Cordoba (Argentina) and Member of the United Nations Scientific Advisory Council*

Rooted in the soil, rooted in the mind: the socioecological value of centuries-old trees

Susanna Nocentini, *President of the Italian Academy of Forestry Sciences*

From conservation to management: what old-growth forests teach us

13:00 *Light lunch*

14:15 - *First Session*

The naturalistic complexity of old-growth forests

Knowledge of the main characteristics of old-growth forests, with particular attention to the interdependence relationships with climate change. Understanding and being able to recognise old-growth forests through their specific structural, physiognomic, botanical and zoological characteristics allows us both to appreciate with greater awareness the many positive effects on the environment, from the improvement of the climate to the conservation of rare species, and to encourage the creation of new ones or the preservation of existing ones.

Chair

Piermaria Corona, *Director of the CREA Forest and Wood Research Centre*

Alessandro Chiarucci, *Professor at the University of Bologna*

Institutional greetings

Chuck Cannon, *Director of the Tree Research Centre of the Singapore Botanical Garden*

The Genesis of Ancient Trees in Old-Growth Forests and Their Significance in Conservation Biology

Franco Biondi, *Full Professor of Dendrochronology at the University of Nevada (USA)*

Dendrochronology: Dendrochronological analysis of the longevity of trees around the world using ITRDB data

Francesco Dentali, *FADOI National President*

The "One Health" approach to safeguarding human health

Jiajia Liu, *Researcher at the University of Cambridge (UK) – Ecology and Forest Conservation Group*

Strategies for the protection of ancient trees in the world

Martin Mikolas, *Researcher at the Faculty of Forestry and Wood Sciences, University of Prague – Czech Republic*

Attributes of primary old-growth forests in Europe

Juri Nascimbene, *Professor at the Alma Mater Studiorum University of Bologna*

Bioindicator lichens of old-growth forests

16:30 -17:30 - *Side event*

The National Network of Old-Growth Forests

In recent years, thanks to the European and National Forest Strategy and the Consolidated Law on Forests, the 'National Network of Old-Growth Forests' was established in April 2023 with the direct contribution of the regions. It may only host forest coenoses that respond to physiognomic, structural, and ecological characteristics. In this *Side Event*, in addition to learning more about this network and how to access it, the issues related to the implementation of the network and how it can represent a synergistic element for the identification and conservation of this extraordinary plant heritage present in our country will undoubtedly be addressed to a greater extent than one might think.

Chair

Alessandra Stefani, *Former Director General of Mountain Economy and Forestry at the Ministry of Agriculture, Food Sovereignty and Forestry*

Rinaldo Comino, *Director of the Forestry sector of the Friuli Venezia Giulia Region*

The network of old-growth forests in the Friuli Venezia Giulia region

Carlo Urbinati, *Full Professor of Silviculture and Forest Management at the Polytechnic University of Marche (Ancona)*

Giulio Cicalè, *Directorate for Agriculture and Rural Development – Forestry and Wildlife and Hunting Policies Sector of the Marche Region*

Old-growth forests in the Marche Region: An unexpected presence

Salvatore Digilio, *Officer of the Forestry and Land Protection Office – Directorate General for Agricultural, Food and Forestry Policies of the Basilicata Region*

Old-growth forests in the Basilicata Region

Alessandro Cerofolini, *Manager at the General Directorate of Forests of MASAF*

The role of the MASAF Forestry Directorate in the creation of the network of national old-growth forests

17:45 - Departure for Vallombrosa

18:45 - Arrival in Vallombrosa

20:15 - Social Dinner

2nd October – Vallombrosa (Reggello - FI) - Salone del Capitolo, Abbey of San Giovanni Gualberto

8:45 – *Arrival and accreditation*

9:00 – *Institutional greetings*

9:15 - *Second session*

The old-growth forest: dynamic processes and climate change mitigation

Old-growth forests represent a biodiversity hub that must be explored at the level of species, communities, and population genetics to be compared with other semi-natural ecosystems to understand their evolutionary potential. Old-growth forests, therefore, play a central role in the conservation and, above all, in the restoration of ecosystems as a reference model to increase their capacity to absorb greenhouse gases in the fight against climate change, and its effects. So, old-growth forests offer elements of fundamental importance in the study and understanding of the interdependence and interconnection between climate change and biodiversity.

Chair

Giorgio Matteucci, *Research Director at the Institute for BioEconomy of the National Research Council (CNR) and President of the Italian Society of Silviculture and Forest Ecology*

Lorenzo Ciccarese, *Research Director, Head of the Area for the Conservation of Terrestrial Biodiversity*

Jan Esper, *Professor at the Department of Geography, Johannes Gutenberg University (Germany)*

Dendrochronology and climate change

Anssi Pekkari, *Senior Forestry Manager, Team Leader, Global Forest Resources Assessment (FRA) at FAO's Forestry Division (Finland)*

Connecting nature and climate through the protection of primary forests with high ecological integrity

Tommaso Anfodillo, *Full Professor of Forest Ecology at the University of Padua*

Marco Carrer, *Full Professor at the University of Padua*

New approaches in the study of the ecological complexity of old-growth forests

Gherardo Chirici, *Professor of Forest Inventories and Remote Sensing at the University of Florence*

Mapping old-growth forests as carbon sinks

Giuseppe Modica, *Professor at the University of Messina*

Francesco Solano, *Researcher at the University of Tuscia*

Giovanni Quilghini, *Commander of the CC Biodiversity Department of Follonica*

Role of integral reserves in mitigating the effects of climate change

Sabina Burrascano, *Associate Professor at the Department of Environmental Biology of the University of Rome "La Sapienza"*

Old-growth forests as a reference for the management of European forests and the conservation of multitaxonomic biodiversity

Andrej Boncina, *Professor at the University of Ljubljana (Slovenia)*

Lessons from old-growth forests for ecological forest management: Slovenia as a case study

Francesco Maria Raimondo, *Director of PLANTA (Autonomous Centre for Research, Documentation and Training) in Palermo*

Old-growth forests and monumental trees

Laura Sadori, *Director of the Department of Environmental Biology and Professor at the University of Rome "La Sapienza"*

Forests, man and climate change

12:00 – 13:30 - Side event

UNESCO Old-Growth Forests

The UNESCO World Heritage Site protects over 200 forest ecosystems of "outstanding universal value", which extend globally over a total area of over 69 million hectares. These forests are distinguished by their extraordinary ecological integrity, allowing for the preservation of natural processes in various biomes, from rainforests to boreal, in areas recognised as biodiversity hotspots.

The Side Event will delve into the case study of the transnational serial site "Ancient primordial beech forests of the Carpathians and other regions of Europe". This heritage, which protects approximately 100,000 hectares of old-growth beech forests distributed across 18 countries in Europe, represents a virtuous model of international collaboration, capable of effectively combining the dual objectives of protecting and restoring old-growth forests as part of global strategies for biodiversity conservation and climate change mitigation.

Chairs

Gianluca Piovesan, *Professor at the University of Tuscia*

Raffaele Manicone, *Commander of the Carabinieri Biodiversity Group*

Alessandro Balsamo, *Head of the UNESCO Nominations Unit*

The UNESCO world forest heritage

Francesco Ripullone, *Professor at the University of Basilicata*

The ancient woods of Basilicata between biodiversity and resilience

Hannes Knapp, *Professore di Geografia fisica dell'Antropocene, Università di Heidelberg (Germany)*

Old-growth beech forests – a joint natural heritage of Europe

Jana Mikudová, *Director of Permanent Secretariat of UNESCO WHS "Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe" (Slovakia)*

Martina Pipišková, *Communication and PR specialist at Permanent Secretariat of UNESCO WHS "Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe" (Slovakia)*

Management, Leadership and Communication Inspirations from World Heritage Beech Forests

Paola Ciampelli, *Commander of the CC Biodiversity Department of Pratovecchio*
The Sasso Fratino State Nature Reserve is an example of nature conservation and restoration.

Luciano Sammarone, *Director of the Abruzzo, Lazio and Molise National Park*
Reflections on the governance of old-growth forests

13:30 – 14:30 – Light Lunch

14:30 – 17:30 Third Session

Old-growth forests: conservation and sustainable silviculture models

Through the conservation, restoration and study of old-growth forests, especially from the point of view of their evolutionary dynamics, very valuable indications can also be drawn on which management models to adopt to make sustainable the economic activities (forestry, tourism, energy, etc.) that can be carried out in forest areas, through the adoption of adaptive cultivation schemes.

Forest management that considers nature is, in fact, capable of optimising all ecosystem services according to the principle of One Health. Old-growth forests represent an irreplaceable element of the connection between nature and human health, psychophysical well-being, and population safety.

Chairs

Marco Marchetti, *Professor at the University of Rome La Sapienza and President of the Alberitalia Foundation*

Antonella Canini, *Full Professor of Botany at the "Tor Vergata" University of Rome and President of the Italian Botanical Society*

Anique Hillbrand, *Forests and Grasslands Team, IUCN*

Safeguarding Old-Growth & Primary Forests: Policy and Communication for Conservation & Restoration

Klaus Puettmann, *Professor in the Department of Forest Ecosystems and Society at the University of Oregon (USA)*

Development of old growth temperate rainforests: implications for silviculture?

Renzo Motta, *Professor at the Department of Agricultural, Forestry and Food Sciences of the University of Turin*

Age indicators for "closer-to-nature" management

Roberto Tognetti, *Professor at the "Free University of Bozen-Bolzano"*

Ecophysiological and ecosystem processes in old-growth forests

Zoltan Kun, *Researcher at the Wildland Research Institute (WRI), Faculty of Geography
University of Leeds (UK)*

Old-growth forest: the urgency of mapping and protection

Danilo Russo, *Full Professor of Ecology at the Department of Agriculture of the
Federico II University of Naples*

Bats and old-growth forests

David Costantini, *Professor at the Department of Ecological and Biological Sciences
of the University of Tuscia - Viterbo*

Daniele Canestrelli, *Director of the Department of Ecological and Biological Sciences
of the University of Tuscia - Viterbo*

**Animal behavioural, physiological, and genomic responses to landscape
changes**

Paolo Audisio, *Professor at the Department of Biology and Biotechnology "Charles
Darwin" of the University of Rome "La Sapienza"*

**The entomofauna of old-growth forests as an indicator of naturalness in forestry
close to nature**

Mauro Bernoni, *Ornithology Expert*

The conservation of ornithofauna in the management of old-growth forests

Giorgio Matteucci, *Research Director at the Institute for BioEconomy of the National
Research Council (CNR) and President of the Italian Society of Silviculture and Forest
Ecology*

Livia Zapponi, *Researcher at the National Research Council of Italy - Institute of
BioEconomy - San Michele all'Adige (TN)*

**Resilient Trees: old-Growth forests and veteran trees for biodiversity and
resilient landscapes**

Jens-Christian Svenning, *Full Professor at the Department of Biology at Aarhus
University (Denmark)*

**Woodland Restoration Beyond the Closed-Forest Paradigm: The Role of Trophic
Rewilding**

17.30 - 18.30 Side event (resp Carabinieri forestali)

Visit experimental arboretums

**At the entrance to the *arboreta*, the Commander of the Carabinieri Biodiversity
Group will collect the wood samples taken (according to the extraction protocol
that was sent to the participants) from specimens of iconic ancient trees of the
continent of origin for subsequent radiocarbon dating for the creation of a
network of the green patriarchs of the globe.**

3rd October – 9:00-13:00 / 14:00-16:00
Vallombrosa (Reggello - FI) - Salone del Capitolo, Abbazia di San
Giovanni Gualberto

Study Day

**The relationship of old-growth forests with
the spirituality of human cultures and civilisations.
Ethical reflections 10 years after *Laudato Si'***

An old-growth forest expresses, perhaps more than any other natural ecosystem, the strength, beauty and mystery of Nature. Amazement, admiration, respect, emotion, fear, meditation, there are many feelings that it can arouse. What common commitment can be born for the Planet, starting from a common spiritual reflection on Nature that the cathedral/temple-forest can suggest?

The study day focuses on the history of forests and their relationship with human cultures and civilisations. The comparison between past and present, as well as between different local contexts, helps to underline that the history of human beings is also a history of the environments in which they live and are transformed by them, and also sheds better light on biodiversity conservation strategies.

9.00 – 9.15 *Arrival and accreditation*

9.15 – Opening of the works:
Morning session

Chair

Mario Salomone, *Secretary General of the World Network of Environmental Education (WEEC Network)*

09:30 Giuseppe Buffon, *Vice Rector of the Pontifical Antonianum University of Rome*
Care for our common home

09:50 Shonil Bhagwat, *Professor of Environment and Development and Director of the Faculty of Social Sciences and Global Studies at the Open University (UK)*
Natural sacred sites in the world

10.10 Malika Dispoto, *Member of the Italian Islamic Religious Community (COREIS), Expert in intercultural studies*
Islam and Ecology

10.30 Daniele Garrone, *Biblical scholar and Waldensian Pastor*
Trees and Forests in the Bible

10.50 Kalliopi Stara, *Lecturer of Cultural Ecology and researcher at the Department of Biological Applications and Technology of the University of Ioannina (Greece)*
Spirituality in the Sacred Forests

11.10 Lorenzo Ciccarese, *Research Director, Head of the Area for the Conservation of Terrestrial Biodiversity*

"Forests and Conservation: The Multiple Values of Utility, Symbolism, and Sacredness"

11.30 Aldo Winkler, *INGV Researcher*

Trees, ecology and Judaism

11.50 Luca Santini, *President of Federparchi*

The protected areas of Italy, a treasure of sacred places

12:10 Andrea Gennai, *Director of the National Park of the Casentino Forests*

Monastic Orders and Forests

12.30 Gabriele Cifani, *Professor at the Department of History, Cultural Heritage, Education and Society of the University of Tor Vergata - Rome*

The Sacred Forests of the Italic peoples

12.50 Lamberto Iezzi, *President of Prometeo in Venice - Research and Innovation Center*

Laudato Si' and Old – growth Forest

13,15 – 14,15 *Light lunch*

Afternoon session

Moderator: **Cristina Giannetti**, *Journalist and Head of the CREA Press Office*

Greeting address by Maria Lombardi, Head of Division II of the General Directorate for Biodiversity and Sea (MASE)

14,15 Mauro Banchini, *Journalist and Tuscan president of the Italian Catholic Press Union (UCSI)*

The time of the Forests

14.40 Francesca Dini, *PEFC Italy Promotion Office*

The Forest that cares for and embraces

15,00 – Coffee Break

15.15 -16.00 The moderators of the sessions and *Side Events* conclude the work through the launch of a final document on the importance, conservation and development of old-growth forests.

Chair and Conclusions

Fabrizio Parrulli