

Final motion of the Second International Congress of Silviculture

WHEREAS

1. the forests of the world stretch across more than 4 billion hectares, approximately 31% of the Earth's surface above sea level, and store approximately 289 gigatonnes of carbon in their biomass;
2. approximately 13 million hectares of forest were lost globally between 2000 and 2010; deforestation is concentrated in the tropical zone, while large geographical areas of North America, Canada, India, China, Russia, and Europe have stable or growing forested areas;
3. forests, along with other green spaces, are the backbone of a green infrastructure for the improvement of general ecological quality and the conservation of healthy ecosystems, and as such they can continue to furnish society with priceless goods and services;
4. approximately 38% of the territory of the European Union (EU27) is covered by forests, for a total of more than 157 million hectares and more than 24 billion cubic metres of timber by volume; both in terms of size and of volume European forests are expanding (each year they increase by more than 500,000 hectares and 249 million cubic metres);
5. in general Europe has an adequate and sustainable availability of resources; wood and forest biomass are the main fundamental renewable resource;
6. modern and reliable monitoring methods highlight that the Italian forests area has reached almost 37% of total land area and is expanding through natural recolonization of abandoned agricultural and grazing areas and the ensuing reforestation;
7. Italian forests contain more than 1.2 billion cubic metres of timber and are growing by almost 36 million cubic metres yearly; official statistics report that less than 40% of this is being utilized;
8. 87% of Italian forests are subject to hydrogeological regulation, and about one-third are subject to environmental protection;
9. the majority of Italian forests (more than 68%) are in good phytosanitary condition and the forested area experiencing fires has decreased in recent years also due to changing meteorological conditions;
10. the majority of Italian forests (almost 70%) are privately owned; generally private forests are very small; only 15% of forest properties has a forest management plan;
11. forest products and their related activities have a positive effect on the development of important economic areas (construction, paneling, the paper industry, recycling, energy, and trade) that in Italy provide jobs for around 300,000 employees;
12. at the Second International Congress of Silviculture, more than 400 scholars, scientists, researchers, forest administration experts and students coming from 28 countries on 5 continents participated.

THE CONGRESS PARTICIPANTS EMPHASIZE THAT

1. the forest is an ecosystem offering various functions, goods, and benefits to society: protecting the soil, conserving water resources, defending biodiversity, mitigating climate change, fighting desertification, and producing timber, biomass for energy and non-wood products;
2. the forest helps to reduce the ecological impact from residential and industrial building and to improve quality of life; it has important historical-cultural, aesthetic-scenic, and touristic-recreational value;

3. the forest has rights that must be protected, preserved, and defended in the same manner as all biotic communities, in accordance with the “right to the environment,” in order to guarantee better living conditions to future generations;
4. the forest is an entity with intrinsic value based on: (i) the interest of the landscape and environment, which express a public interest of primary and absolute constitutional value; (ii) a property interest, which concerns its economic and productive function;
5. silviculture has a considerable influence on the status and functionality of natural and cultural landscapes and on green infrastructures;
6. silviculture is crucial for the socio-economic development of rural and mountain areas and for sustaining bioeconomy and green economy;
7. silviculture preserves and creates jobs and earning power, facilitating the competitiveness of forest management, agriculture, and industries in the sector, as reaffirmed by the European Forest Strategy and strongly supported by international organizations, first of all FAO and EFI;
8. an elevated scientific base of research in the forestry sector is indispensable for surmounting imbalances stemming from the most diverse practical applications and from an indiscriminate use of practices unsuitable for the conservation and enhancement of the forest;
9. the considerable advances in technology, while useful for fact-finding and making forecasts, are not capable of solving the “forest question” if not augmented by a specific knowledge of forest problems;
10. it is necessary to integrate our knowledge with the associated ethical values in order to: a) guide the formulation and the implementation of policies favorable to the forestry sector; b) support research bodies in planning studies to be conducted in the near future;
11. macroregional interactions at the European level, particularly in the Mediterranean area, must be enhanced, together with cooperation with scholars of all countries in order to spread research findings and facilitate possible collaboration;
12. the future of the forestry sector must be designed within the framework of a more wide-ranging promotion of policies aimed at quality of life;
13. it is essential to favour the dissemination of knowledge and the update of all forest workers, improving: a) forest worker qualification; b) the awareness of the importance of the quality of silvicultural interventions; c) safety of forest operations;
14. active forest management according to internationally recognized criteria of sustainability represents the main tool for guaranteeing the effective defence and enhancement of the forest heritage, contributing to the achievement of specific objectives for the fulfillment of international commitments regarding the mitigation of, and adaptation to, climate change and the protection of the environment and landscape;
15. knowledge of new research methodologies means support for bringing about social and economic policies and for dealing with and solving the many sets of forestry problems, with respect to the differing conditions of various countries;
16. systemic silviculture, or *Silvosistemica*, explains the natural dynamic of the forest and guarantees, on the one hand, sustainable management from the ecological, economic, and socio-cultural point of view, and on the other, protects genetic resources and decreases the risks of biologic contamination;
17. it is necessary to promote, as indicated by the new Forest Strategy of the European Union, the awareness that sustainable forest management improves competitiveness of forest enterprises and is an instrument for creating jobs, particularly in rural areas while at the same time guaranteeing forest protection and forest ecosystem functioning;

18. the recent change in market demand for timber products toward use for energy is penalizing wood uses which provide for a longer carbon storage (e.g. building with higher environmental standards, furniture etc.). It is necessary to increase life length of wood products (e.g. with design and technological innovations) and make the improvement of wood quality an aim of silviculture;
19. wood quality is influenced by silviculture; technological transfer in the forest-wood chain needs experts in wood technology, who are able to link biological and technical knowledge in the different fields of application.

REGARDING SCIENTIFIC RESEARCH
THE CONGRESS PARTICIPANTS RECOMMEND THAT

1. university education will be supported, in a network, with the establishment of centers of excellence and the creation of specialized schools; technical-professional education, environmental education, and youth entrepreneurship will be promoted in forestry;
2. financing of forestry research excellence carried out at universities and research institutes will be increased so as to enhance competitiveness and integrate them into a network;
3. in research, the use of the reductionist, deterministic, and mechanistic exact sciences (nomothetic, or, in short, Newtonian mechanics) will be supplanted by the procedural sciences (developmental or historical) that take holism, organicism, and systemic thought into consideration;
4. Silviculturists and Wood technologists evaluate the implications of tree physiology and of the genome/functioning relations;
5. a clear language of forestry and the interactive transmission of forestry literature and new research methodologies will be promoted;
6. scientific knowledge on how forest ecosystems work will be translated into new management strategies that are adaptive and scientifically oriented;
7. the adoption of systemic silviculture oriented toward “active conservation” of biodiversity will be encouraged, effecting measures to prevent biotic and abiotic damage;
8. research on hydrogeological protection and on the role of silviculture for soil and water conservation will be strengthened.

THE CONGRESS PARTICIPANTS FOR ITALY RECOMMEND THAT

1. strategic guidance in the forest sector will be again carried out, with a revision, simplification, and update of the policies for the sector, and with the presentation of laws on forestry matters containing innovative tools capable of responding effectively to modern environmental and social needs; to economic, production, and employment necessities; and to international and EU commitments;
2. full force be given, and updates be assured, to the forest strategy defined by the Framework Programme for the Forest Sector, including by effecting greater institutional coordination among Ministries concerned with forestry matters;
3. a permanent office for coordinating forestry issues in the Ministry of Agricultural, Food and Forestry Policies be established that, while complying with the powers and the roles that the Constitution defines for the relationship between State and Regions, would also represent a single point of contact and guidance for national forest policies, and would coordinate institutional and inter-institutional cooperation for national and regional administrative bodies concerned with forestry policies and planning, as well as liaise with all international and EU initiatives in forest matters;

4. an appropriate plan of development and innovation transfer be promoted to foster an increase in the availability of wood materials for industry and energy within the framework of rural development actions on the national level;
5. tax relief be granted for forest operations, along with incentivizing and financially supporting forest improvements, including remuneration for forest ownership to the extent it produces environmental services in the public interest;
6. a cognitive framework for the situation and for forestry activity will be developed on a national level in order to analyze trends, stimulate research institutions, appeal to associations that serve the forest-timber-environment distribution chain and the world of business and labour;
7. in land planning policies and strategies the importance of silvicultural activities will be recognized as operational tools effective for the preventing and mitigating hydrogeological degradation and for securing land safety;
8. in the struggle against forest fires, the culture of emergency will be supplanted by silvicultural prevention, the development of innovative technologies for the forecasting of risk (remote sensors, environmental modeling), and monitoring of the effects of such events in ecological, economic, and social terms;
9. the forest-timber-environment distribution chain will be supported in all its stages, with particular reference to “short” distribution chains, also by means of certifying processes and quality of forest products, also promoting technological, scientific and technical education in the wood sector;
10. integrated forest-fauna management will be promoted, in the awareness that the forest fauna is an essential component of forest ecosystems; rational forms of grazing will be incentivized and supported in order to guarantee harmony among interacting ecological and socio-economic processes with the goal of protecting the forests;
11. the development of entrepreneurship for the forest-timber distribution chain be promoted, involving the trade associations, guaranteeing the following to those with interests in the sector: recognition of the specific legal form; appropriate education and safety on-the-job; the coordination and mutual recognition, both among Regions and at the European level, of lists or registers of firms accredited to carry out work, activities, and services in the forest area and in land safety;
12. the law will take into account growing economic necessities and social needs; and guarantee an effective and widespread realization of actions necessary for the fulfillment of international guidelines and priorities in environmental, energy, and climate matters;
13. growth and ability to face new challenges and opportunities on the side of forest enterprises will be stimulated, also through efficient resource and energy use, structural improvement, innovation, education and development of competences;
14. useful administrative tools be identified and implemented for promoting and incentivizing sustainable forest management aimed at guaranteeing the continuity and spread of active forest management, including using local marketing strategies and promotions for forest products, also through the creation of a label “wood from Italy”;
15. association among forest owners be promoted in order to limit the negative effects of property fragmentation, also for facilitating infrastructure planning and shared use of technologically advanced machines and equipment;
16. a public awareness campaign be launched by central authorities of the State, Regions, and Autonomous Provinces, in collaboration with the Universities and Research Authorities, clarifying the risks associated with forest abandonment and underlining the importance of proper forest management for land safety.