

Preface

The Second International Congress of Silviculture was held in Florence from the 26th to the 29th of November 2014. It was organized by the Italian Academy of Forestry Sciences, together with the Italian State Forest Service and the Tuscany Region, on the 100th anniversary of the foundation of the National Forest Institute.

It was held in three Conference halls in the historic center of Florence: Palazzo Budini Gattai in Piazza Santissima Annunziata, the Auditorium of the Ente Cassa di Risparmio di Firenze and Palazzo Medici Riccardi. The Opening Ceremony was held in the Salone dei Cinquecento in Palazzo Vecchio.

The First International Congress of Silviculture took place in Rome in 1926, from April 29th to May 5th. It was organized by the International Institute of Agriculture to discuss forestry issues of the whole world.

After almost a century, the Second Congress arose from the need to highlight the growing importance of the use of forest resources and silviculture, in the economy of individual countries, with environmental effects that have an impact on a global scale.

During the Congress, government and local administration representatives, researchers from universities and other institutions, stakeholders from the public and private forest sector exchanged their views and experiences in order to make recommendations on a regional, national and global level particularly on the following aspects:

- improving of the work in the forest and the qualification of human capital, also to support the country's economic growth;
- communicating to society the potential of the forest sector for human well-being;
- presenting the economic problems connected to the forestry sector, also in relation to spending review and cost-cutting policies;
- defining a solid scientific basis for research in forestry, to overcome the imbalances that may result from indiscriminate use of technology.

In particular, the Congress developed the following five objectives:

- 1) present the forest situation at the global level, in order to analyze trends, encourage government agencies, support research institutions, aid the associations that work in the timber industry and the business world;
- 2) bring together knowledge and the related ethical values in order to define and implement favorable policies for the forestry sector;
- 3) highlight scientific innovation and help national and international research organizations to promote future research projects;
- 4) encourage the development of a clear forestry language, the interactive transmission of forestry literature and the use of new research methods;
- 5) promote cooperation among scholars of all countries for the dissemination of results and to facilitate new collaborations.

The Congress was organized into the following eight thematic sessions: 1) Ecology, biodiversity, genetic processes and adaptation of forests to climate change; 2) Forestry and land conservation; 3) Global Change: forestry, resilience of forest landscapes and production of ecosystem services; 4) Bio-economy and security of production forest; 5) Economics and Forest Policy; 6) Human capital: innovation, skills, ergonomics and health; 7) Monitoring and planning; Innovation and sustainability impacts of the use of wood.

Twenty invited speeches and 120 oral presentations were held during the Congress. The poster session included 32 posters. Most of the oral presentations are published in these Proceedings as a scientific article and indexed with the *Digital Object Identifier* (DOI). When no written text was sent by the authors, only the abstract of the presentation is published.

Altogether, the Proceedings bring together the work of 450 authors from the Mediterranean basin, central and northern Europe, North and South America, China, Vietnam, Australia and Africa.

Two panel discussions on topics of great scientific interest were held during the Congress: Silviculture for the future: a global outlook; Research and innovation transfer in the forestry sector.

The event also hosted the Workshop “Future-oriented integrated management of European forest landscapes - the INTEGRAL project: main research findings in Italy” within the INTEGRAL European project (www.integral-project.eu).

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