**SUBJECT**: SESSION PROPOSAL FOR THE CONGRESS THEME - Forests and Forest Products for a Greener Future

**Organizers**:

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**Session title:** Implementation of silvicultural treatments and their effects into forest growth models

**Short abstract of the session proposal**

Since the development of the first yield tables in the 19th century, growth models have played an important role in research and as tools to support management decisions. Forest growth models are necessary for a wide range of forest uses. Even though timber production has been the main objective of much research in the past, the understanding gained with respect to the underlying mechanisms governing forest growth is crucial for proper understanding of forest growth under changing environmental conditions and management. During the last two decades, and in particular since the Earth Summit in Rio de Janeiro in 1992, forest management has become increasingly complex. At present multifunctional sustainable forest management (MSFM), aims at optimization of the production of multiple products – timber, wood for fuel, cork, berries, game, medicinal plants, etc… while safeguarding the quality and the sustainability of the forest ecosystem and satisfying society’s needs and demands for recreation, biodiversity, landscape and environmental conservation. This requires the application of more complex silvicultural models, namely complex thinning regimes and regeneration under forest cover, that are not always well taken into account by current forest growth models. A recent literature review (Burkhart and Tomé, 2012) pointed for the need to improve the situation in what concerns modeling the effects of silvicultural treatments. Additionally, the methodology used by some of the most well known forest models to implement the silvicultural treatments that imply the use of algorithms applied on a tree basis – e.g. thinning algorithms – is not available in the scientific journals but else in gray literature, not easily accessible.

The objective of the session is therefore to make a survey of how silvicultural treatments – thinning, regeneration, fertilization, etc – and their effects are implemented into current growth models. A broad and interesting discussion on the improvement of the current deficit is expected.

**Further information:**

The proposed format of this session is the presentation of voluntary individual papers. The session will be announced as broadly as possible with the objective of bringing in presentations of material that has never been published. For this purpose up to 9 speakers will be selected for a total of 2h ½.(15 minutes/presentation + maximum 2-3 minutes for questions for each presentation).

Poster are also expected and a summary slot will be organized in connection to the oral presentations.