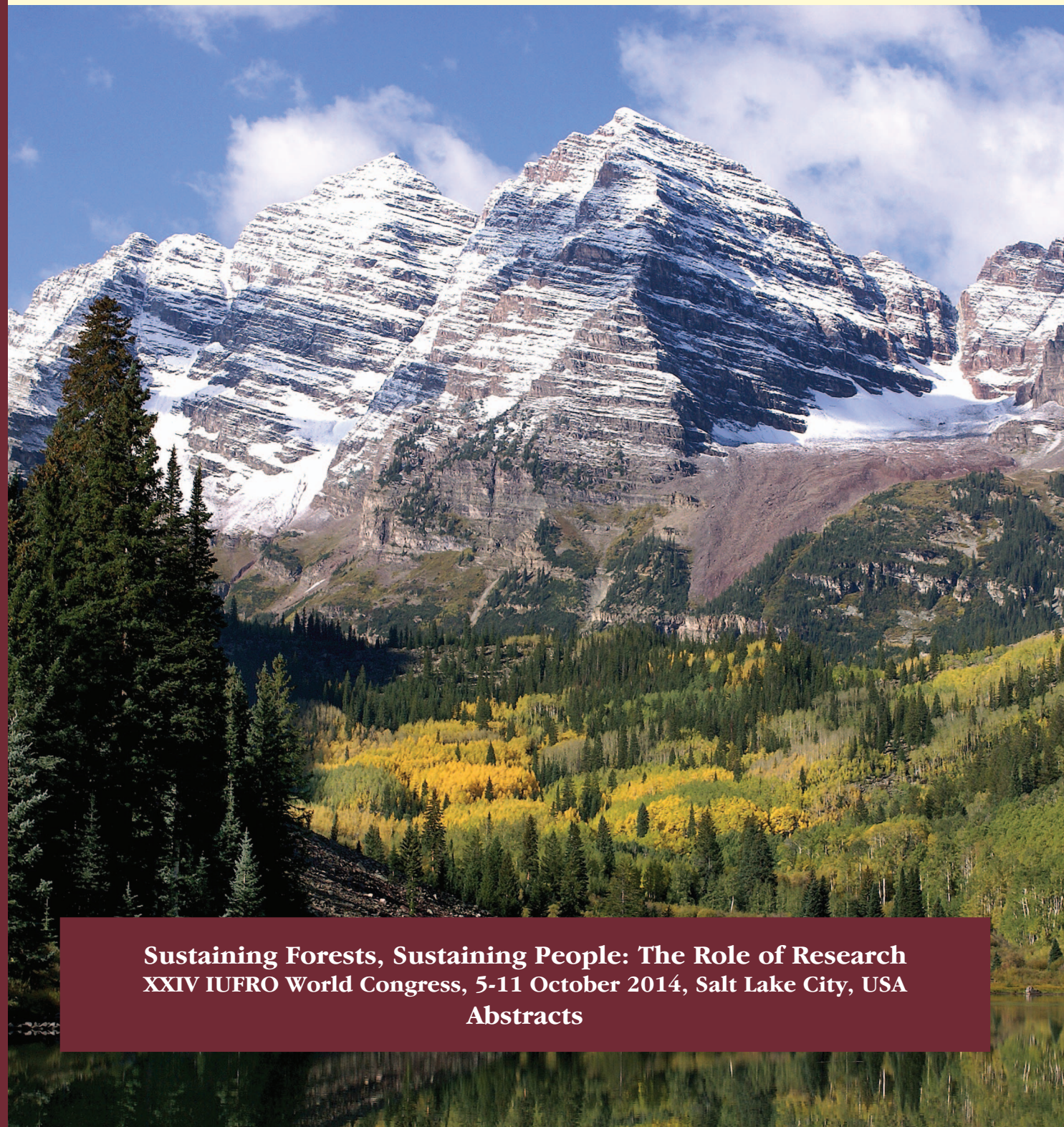


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EDITORS: JOHN A. PARROTTA, CYNTHIA F. MOSER, AMY J. SCHERZER, NANCY E. KOERTH and DARYL R. LEDERLE

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Implementation of thinnings in individual tree and diameter distribution growth models; an application to maritime pine stands in Portugal. Soares, P. (Technical University of Lisbon, Portugal; paulasoares@isa.utl.pt), Alegria, C. (Instituto Politécnico de Castelo Branco, Portugal; crisalegria@ipcb.pt), Fidalgo Fonseca, T. (University of Trás-os-Montes and Alto Douro, Portugal; tfonseca@utad.pt), Nunes, L. (Instituto Politécnico de Bragança, Portugal; lfnunes@ipb.pt), Tomé, M. (Technical University of Lisbon, Portugal; magatome@isa.utl.pt).

The purpose of this research was to analyze the methods used for implementation of thinnings in three models developed to manage maritime pine stands in Portugal: (1) Pbirrol, an individual tree model that can be applied to uneven-aged stands, (2) Pinaster, an individual tree model to be used in even-aged stands, and (3) ModisPinaster, a diameter distribution model to be used in even-aged or uneven-aged stands. In these models, the decision of which trees are thinned is based on a probability function that can be associated to a cut-off or a density variable (e. g., Wilson's factor, residual basal area, SDI). To assess the suitability of how thinnings are implemented in these models, two analyses were made: (1) even-aged models, Pinaster and ModisPinaster, were used to simulate the thinning practice of several plots of a thinning trial and stand variables estimates after thinning were compared with the measured values, and (2) forest inventory plots were used as a starting point to analyze the effect of considering an uneven-aged or an even-aged stand management using Pbirrol and Pinaster, respectively.