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| **Quantitative characterization of needs and preferences of end users for the generation of tree list maps to project forest management scenarios under climate change conditions in Spain** |
| **Introduction/Aim:** The European Union (EU) Forest Strategy for 2030 identify the most important threats for forests (e.g. forest fires or climate change) and establish the guidelines and objectives shaping forest management practices in the coming years. It is of vital importance to provide forest managers with tools to anticipate potential consequences of competing management alternatives, e.g. distance-independent climate-sensitive tree-level growth models (DI-CS-TLGM) and fire spread simulators. These models are available for most forest types in Spain but require input data in the form of tree lists maps that have not been developed yet. Nowadays, plenty of open remote sensing (RS) data and ground observations in forest environments are available in Spain to develop tree list maps. However, the high level of disaggregation of this output requires considering the main preferences of the final users of these RS products.We propose a replicable methodology to integrate available sources of information into predictive models to generate tree list maps to satisfy the information needs of forest managers. This methodology adapts the one developed in Meddens et al. (2022) to the Spanish context and it is preliminary based in interactive sessions where land managers are asked about their most important needs of information, the precision requirements that they have and the spatial detail at which they develop their work. This information is used to inform the selection of models for tree list prediction.**Methods:** The characterization of needs and preferences is organized in two tasks. The first one focused on contacting groups of potential users and delivering a questionnaire to identify most important responses for management applications. For this purpose, we contacted five different group users of tree list maps (e.g. forest managers from public administration, private forestland owners, firefighting personnel, scientists from universities and research centers, and professionals from private companies). We used the methodology described in Meddens et al. (2022) for the identification of needs about RS products. The interviewees were asked to enumerate variables verifying that can be computed using data from Spanish National Forest Inventory (SNFI) plots, and if available in a map format would facilitate their work. In the second task, interactive sessions will be implemented to collect answers to Analytic Hierarchy Process (AHP) questionnaires to obtain preferential weights for the variables identified in the previous task. The answers will be used to derive preferential weights that will be used in the model fitting stage.**Results:** Preliminary results highlighted the importance of having aggregated products such as total volume or basal area, but also the need for more disaggregated information such as diameter distributions. Interviewees consistently reported difficulties in data access and data maintenance, despite the availability of numerous open datasets. The respondents also identified difficulties or lack of technical expertise. The results of this survey are important for the generation of tree list maps. Adhering to the needs reported by final users we will be able to generate products that will enable using tools for creating a more diverse and resilient forest structures.**References:**Meddens, A.J. et al. 2022. Specifying geospatial data product characteristics for forest and fuel management applications. [*Environ. Res. Lett.* 17(4): 045025](https://iopscience.iop.org/article/10.1088/1748-9326/ac5ee0) |