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| **Enhancing tree list maps by incorporating end-user preferences of remote sensing products.** |
| **Introduction/Aim:** Distance independent growth and yield models, along with fire spread engines rely heavily on detailed, spatially explicit inputs provided by tree lists maps. By leveraging tree lists, numerous attributes crucial for various forest management tasks can be calculated. However, prioritizing one attribute during model selection for tree list prediction may lead to poor performance. This issue becomes apparent when the modelled tree lists are used to derive other equally significant attributes relevant to forest management. To address this challenge, we propose refining the model selection process for tree list prediction by incorporating the forest attributes that final users deem most important, and also considering the relative importance or weight assigned to these attributes by users. **Methods:** We conducted an extensive study to identify the key variables essential for refining model selection in tree list prediction. To achieve this, we directly engaged with end users of the tree lists maps, soliciting their insights on the forest attributes critical for their work. Users were asked during interactive surveys administered both in the Western US (Meddens et al. 2022) and Spain. Results from these surveys were used to identify both the most important attributes for end users and their relative importance. Then, we fitted and compared imputation models to predict tree lists by: 1) optimizing the model performance for each of the identified attributes alone, and 2) optimizing the model performance of a weighted average of all identified attributes. For the second alternative, attributes were weighted according to the importance reported by the end users in the interactive surveys.**Results:** In both the Western US and Spain, optimized models for a single attribute resulted in tree lists with a very poor performance for other important attributes highlighted by forest managers. This issue was especially pronounced in the Western US with models optimized for basal area (BA) and mean tree height (MTH). Specifically, trees lists derived from optimized BA models depicted a root mean square error (RMSE) for MTH that was 76.86% higher than the RMSE obtained from MTH optimized models. This model selection strategy showed that by integrating the attributes’ weights reported by end users in the model selection process, it was possible to obtain tree lists maps that: 1) were more balanced for all attribute and 2) had only moderate loses in performance with respect to models optimized for a specific attribute. **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) |