

Drones and Dendro: an opportunity for precision silviculture

Summary



The state of Durango is the national leader in forestry production in Mexico, which demands high levels of commitment considering the fresh challenges that threaten productivity. Climatic change and obsolete management techniques constitute an area of opportunity for the maintenance of sustainability. Loss-making forests and those vulnerable to hydroclimatic variations demand new forestry management strategies, in accordance with the new challenges while avoiding destructive sampling or reductions in their precision and reliability. The present proposal is to study the integration of dendroecology and UAVs as allied technologies with which to improve our knowledge of the ecological and silvicultural parameters of the forest, which have already shown their reliability in technified countries. Using dendroecological proxies and high-precision remote sensors in a pilot area, multi-seasonal data will be obtained pertaining to productivity, volume, biomass and indices of vigor at individual tree level. Through the integrated effort of students, researchers, decision-makers and silviculturists, it will be possible to document the findings in theses, scientific reports and demonstrative modules for funding sources and society alike.

