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Conference Abstract

Do we need ground-based long-term forest monitoring?

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Abstract

Monitoring is a time series of measurements of physical/chemical/biological variables designed to answer questions about environmental change. Long-term forest research needs long-term comparable data on a variety of ecosystem components and processes – thus it needs monitoring. Besides its contribution to research, monitoring is the scientific approach that permit us to know status, changes and trends of the condition of our forest ecosystems.

For the above reasons, the title's question ("Do we need ground-based long-term forest monitoring?") may look rhetoric. It is not – at least when considering several questions often placed to those in charge for monitoring programs, e.g. is monitoring a science? Is monitoring cost-effective? Can today's monitoring programs answer tomorrow's questions? Why not using satellites instead of ground-based observations? and so on.

While not ignoring the persistent skepticism around ground-based forest monitoring, here I will present why and how ground-based forest monitoring (i) remain an essential scientific approach even in the age of modeling, remote sensing and AI and (ii) keep its relevance to policy, society and ecological research. I will also present how re-inventing forest monitoring is an urgent task that require joining our forces for better information and understanding of the dynamics of our forests.

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Conflicts of interest

The authors have declared that no competing interests exist.