

Concept note

## Communicating facts, findings and thinking to support evidence-based strategies and decisions

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Since 2013, *Annals of Silvicultural Research* has gained increasing consideration within the international scientific community, as a steadily growing number of citations clearly demonstrates. After being included in the SCOPUS database in 2017, a second, significant turning point has now been reached with the second quartile (Q2) for the Forestry subject category of the SCImago Journal Rank, a rewarding result after just few years of indexing. This achievement is even more relevant considering that, quite surprisingly, only a very minor part of the articles published worldwide under the Forestry subject category directly refers to silvicultural aspects (Corona 2017).

The role of scientific literature is to raise critical questions and to be critical about the possible answers. Under this perspective, I do expect that *Annals of Silvicultural Research* will continue to effectively contribute to challenging common assumptions, theoretical and empirical approaches, methodologies and/or research data in order to gain an ever clearer understanding of the most recent issues in silviculture. The main challenge is to provide reasoning that supports environmentally-sustainable, socially-cohesive and economically-viable forest management strategies, based on decisions that are scientifically evidence-based, i.e. derived from, or informed by, objective evidence grounded on transparent methodological approaches, coherent with the declared objectives of the research and recognizable by the scientific community worldwide.

As in many other fields, silviculture is fraught with conflicting viewpoints and beliefs that may give rise to misinterpretation or distortion of seemingly concrete and objective evidence. For example, the selection and presentation of empirical data could be manipulated to corroborate or disprove theories, and cherry-picking certain research findings,

and ignoring others, could be used to generate the perception that certain approaches are more successful than they truly are. To this end, the quality of available evidence, as well as the methods used to analyze research data, can directly contribute to set proper interpretative frameworks.

On the other hand, debates about evidence-based approaches to silviculture depend largely on the evidence and context in question, including how the available evidence is specifically being used or not used. For instance, in some situations stakeholders may argue that actual overabundance of information has made it infeasible, or even virtually impossible, to act thoughtfully and appropriately on available evidence. In the light of this, it has also been stressed that making observations and collecting data even in very sophisticated ways but without the trace of a theory can be addressed as “scientific philately” (Deléage, 2000). To know the conceptual paths, the substantive reasoning, the founding assumptions that characterize the scientific discipline at hand is essential: it is from this knowledge base that our commitment as researchers can be constantly reformulated and relaunched with new and original ideas and motivations. A paradigmatic example is given by the ongoing debate about the so-called new silvicultural approaches, such as ecological forestry (Batavia and Nelson, 2016) or systemic forestry (Nocentini et al., 2017). The inspiring role of literature from scientific journals is substantial to this end.

The use of objective evidence in forestry has grown increasingly common. At the same time, technological evolution appears to be quite extraordinary in this sector and capable of rapidly transforming the frame of reference and opening up to emerging disciplines such as genomics, biotechnology, nanotechnology, space technology and information technology. A certain perduring lack

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of a truly cognitive and empirically-founded silvicultural culture, however, may hamper an effective understanding of such innovation potential and an adequate transfer of the technological achievements. The exploitation of scientific knowledge to support evidence-based strategies and decisions requires a suitable communication of scientific cultural thinking. I am confident that *Annals of Silvicultural Research* can effectively do its bit to help achieve even this target.

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