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Editorial: Ethnoforestry and its link to socio-ecological changes

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Editorial on the Research Topic Ethnoforestry and its link to socio-ecological changes

Forestry science has thus far mainly viewed forests as arenas whose management must be optimized for ecological services (sustainable exploitation of timber or NTFPs—non-timber forest products, particularly berries and mushrooms) or as pristine spaces to be strictly protected, often isolating them from human interactions. Forestry studies have rarely addressed sociocultural dimensions, i.e., the interactions between forestry systems and human communities, such as forest use and perceptions, often, but not exclusively, captured in traditional/local ecological knowledge and practice (LEK) systems. Although LEK has been the focus of several studies conducted in the past few decades, those studies were primarily devoted to mere descriptions of folk uses and the management of forest environments and their products. These works have often envisioned the potential of LEK for local rural development programs; however, more information is still needed about how LEK systems and their changes are transmitted, especially how LEK copes with global and local socio-ecological changes. Even less has been done regarding the processes through which forestry LEK intersects with concrete projects, i.e., empowering local communities toward sustainable development of their local resources, exploring new strategies for the dynamic conservation of forests, and fostering inclusive platforms shared among local communities, institutions, and external stakeholders.

The valorization of forestry LEK as a resource for genuine sustainable development faces the challenge that these conglomerates of practices and beliefs are often fluid, as they continuously adapt and respond to change, which nowadays is dominated by global issues such as climate change and globalization, including the commodification of common goods and place-based (often customary) rules that in most areas of the world have regulated access to forest resources for centuries. However, place-based, non-global changes may also have a tremendous impact on forests and their perceptions and uses.

This Research Topic presents important case studies that analyze forestry LEK in its transformations with the understanding that this may be a vital linchpin for implementing ecological and social sustainability as well as small-scale circular economies. We sincerely hope that the analysis offered by these inspiring contributions from different geographical and cultural contexts of the world may help to develop a more comprehensive approach to the valorization of forestry LEK.

The study from the Nahua community in western Mexico (Ortega-Álvarez et al.) provides important reflections on the indigenous management of the culturally important species “Guamúchil” (Manila tamarind). The ecological relationship expressed through the cultivation of wild fruiting trees in home gardens as living fences ensured the food and economic impact on local people as well as local birds. As humans and birds share key feeding resources within cultural landscapes, these indigenous agroforestry practices have positively impacted not only the food security of both birds and humans but also the sustainability of the tree itself. The study from the Brazilian Amazonian forest (Alves et al.) analyses the sociological and environmental influences on forestry LEK, evaluating how the characteristics of local forestry experts (work experience, gender, and origin) and environmental hazards (deforestation, mining, and fires) influence this knowledge. The authors identified clear differences in knowledge between genders (women knew more about food while men knew more about construction and fodder). In addition, the length of forestry experience affected knowledge on management and planting, while locals living in communities influenced by mining or deforestation listed fewer wild taxa or more planting, respectively. The study highlights the importance of LEK for forestry experts in maintaining healthy forests, especially those facing environmental threats.

The case study from the United States (Ahmed et al.), on the other hand, investigates the effect of climate change on the observations, perceptions, and knowledge of maple syrup producers. The findings highlight that even though the majority of the survey respondents had direct experience with changes in climatic conditions and adapted their practices accordingly, less than half of them were concerned about the future. The described adaptation strategies were related to species diversification, taps and processing technology alternatives, and product innovation. The study also shows that tribally affiliated producers possess knowledge of multiple long-term adaptation strategies. The study with the Mandinka community in the lower Gambia (Darboe et al.) examines the historical and current human-forest relationship through the example of community-managed forests. The research reveals the crucial importance of the forest for the community’s psychological wellbeing. In addition, study participants described the knowledge-eroding effect of recent socio-economic changes on human-forest relations and the shift from dense forest to mixed forest and grassland. This research underlines the essential need to give a voice to local people in shaping forest management, allowing them to safeguard local biocultural diversity.

Overall, this Research Topic has the modest aim of providing a small contribution to the future of forestry studies by highlighting the benefits of including the perspective offered by LEK systems for further investigating the socio-cultural and spiritual values of forests, which are still the pillars of local communities’ understanding of nature knowledge, and the practices material and immaterial, embedded into them.

The coming years will reveal whether this shift in studying forest environments as complex and multi-layered socio-cultural-ecological spaces can also generate tangible improvements in the lives and wellbeing of local communities.

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