

Chapter 8

The Potential Role of Ecoacoustics in the Study of the Coffee Natural Landscape of Colombia: Bridging the Gap Between Soundscape and Landscape

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ABSTRACT

In 2011, the Coffee Cultural Landscape of Colombia (CCLC) was inscribed in the UNESCO World Heritage List. Several studies have been undertaken to increase its knowledge and promote its conservation and sustainable development; however, there still exists a gap between the knowledge of the visible features of this landscape and the audible ones, which are associated to anthropophonic, geophonic, and, mainly, to biophonic sound-emitting sources. The perception or recording of the audible features in a place has been recently termed as soundscape and is studied by a relatively novel discipline known as ecoacoustics. This chapter is, therefore, aimed to discuss the potential opportunities and challenges of applying ecoacoustic methods—particularly non-negative matrix factorization and acoustic indices—to enrich the study of the CCLC. Essential concepts for both the CCLC and ecoacoustics are also briefly explained, along with an outline of future work directions in short- and long-term perspectives.

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INTRODUCTION

In July 2011, the World Heritage Committee approved the inscription of the Coffee Cultural Landscape of Colombia (CCLC) on the World Heritage List of significant sites as “an outstanding example of a centenary cultural, sustainable and productive landscape [...] where natural, cultural and economic elements are homogeneously combined” (UNESCO, 2011, p. 238-239). Such a unique combination of nature, culture and economy can be observed in a typical view of the CCLC as the one shown in Figure 1, where a brightly-painted rustic house appears surrounded by coffee plantations and some patches of remaining native forest on the steepest slopes, along with simple facilities for self-sufficient farming such as food crops (mainly plantain and others such as guava, yuca and corn), a small hen house and reduced open areas for cattle pasture.

Figure 1. A typical view of the CCLC along the route connecting the municipalities of El Cairo and Argelia, Valle del Cauca. Photo courtesy of Steven Mons
Source: UN Periódico, 2021



The CCLC includes parts of fifty-one municipal jurisdictions in the departments of Caldas, Quindío, Risaralda and Valle del Cauca. According to the public policies defined by the Colombian government to preserve the CCLC (CONPES, 2014), the main aspects to take into account in its preservation include i) cultural diversity (architecture, traditions and artistic manifestations), ii) nature (ecology, biodiver-

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