

Submitted Abstract

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Abstract

The thermo-energetic behavior of a building is determined not only by internal loads, user behavior and the envelope's construction characteristics, but also by the influence of the local microclimate, determined by the building's immediate surroundings. By immediate surroundings we mean the private green areas and setbacks of the building site, the vertical planes of adjacent buildings, and the urban context of insertion. In addition, the importance of these spaces that shape the local microclimate is being investigated internationally with respect to their function in facing climate change, mitigating heat waves and configuring passive strategies of architectural resilience. Complementarily, mountain areas are defined as more vulnerable to global warming (IPCC, 2014), and should be the center of research and action for adaptive capacity. Therefore, in a first moment, through field survey and spatial analysis, the study investigates to characterize green areas in the urban center of Gramado, Rio Grande do Sul, a city of great tourist potential in Serra Gaúcha in the winter period, due to the low temperatures in the altitude zone of the state. This characterization consists of look into the coverage area, vegetation, the relationship between permeable and impermeable area, among others. The results of the study assist in the planning of green areas, mainly private and with direct action on building, at the level of public administration, indicating parameters and standards to be adopted to mitigate future climatic effects in these vulnerable areas of cultural and economic importance.