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STEP-BY-STEP APPROACH TO RANKING GREEN ROOF RETROFIT POTENTIAL IN URBAN AREAS: A CASE STUDY OF LISBON, PORTUGAL

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Highlights

- Methodology to plan large scale installation of green roofs in built environments
- Definition of 5 independent indexes to characterize buildings and green urban spaces in the city
- Step-by-step ranking system
- Identification of priority zones to start green roofs urban policies.
- Exclusion of neighbourhoods with low potential for retrofit

Abstract

In the last years, green roofs have become increasingly popular to improve urban life and help overcome environmental challenges. This paper presents a methodology to rank existing built areas when planning green roofs installation on existing buildings. First, the methodology identifies neighborhoods with real possibilities of receiving green roofs. A further refinement uses urban indexes to estimate the green needs of each selected area. The proposed model was successfully applied to Lisbon, Portugal. Old city areas are discharged while neighborhoods with lack of green spaces appear as priority zones to initiate green roofs urban policies. The results identify 79% of Lisbon with real possibilities of incorporating green roofs and 52% with high potential for

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