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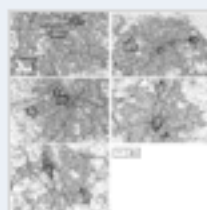
Abstract

Keywords

1. Introduction

2. Methods

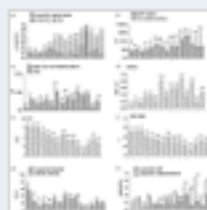
2.1. Data



2.2. Analyses

3. Results

3.1. Comparison of ecosystem performance among 15 study sites



3.2. Correlates of biodiversity potential

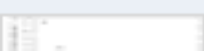
Table 1

3.3. Correlates of ecosystem performance

3.4. Models of biodiversity potential and ecosystem service provision

Table 2

4. Discussion



Urban form, biodiversity potential and ecosystem services

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Abstract

Using data from selected areas in five UK cities, we studied the relationships between urban form and the following measures of ecosystem performance: availability and patch characteristics of tree cover, gardens and green space; storm-water run-off; maximum temperature; carbon sequestration. Although most measures of ecosystem performance declined with increasing urban density, there was considerable variability in the relationships. This suggests that at any given density, there is substantial scope for maximising ecological performance. The social status of residents was related to measures of tree cover. Housing type was significantly associated with some types of ecosystem service provision, indicating that the type of development may be important independent of its density. These findings have implications for understanding the distribution of ecosystem services and biodiversity across urban landscapes, and the management of development aimed at meeting UK government housing density targets.

Keywords

Carbon sequestration; Green space; Housing density; Patch size; Run-off; Tree cover