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THE VALUE OF LAND
ARTIFICIALIZATION

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Recognizing the threat that land-use change poses to both biodiversity conservation and climate change, the French government introduced a target of Zero-Net Artificialization (ZNA) by 2050. Drawing on research on cost-efficiency and the implicit value of carbon, we propose a country-level macroeconomic model in which the social planner integrates the ZNA objective. It is then calibrated for France using an innovative geo-spatial dataset including key characteristics of the soil, such as, current degradation, opportunity costs, and biodiversity areas coupled with heterogeneous costs of land restoration. As such, we provide shadow-values for artificialization at different scales, intended to inform public decisions aimed at achieving the ZNA objective in France. These values account for the current status and heterogeneity of the soils, as well as their respective costs of restoration and building. However, since the approach is not based on a cost-benefit analysis requiring the appraisal of all eco-system services, it substantially simplifies the valuation exercise and is therefore feasible for public administrations. In addition, the methodology is replicable for all EU countries with similar datasets.