Geoscientific
Model Development
Discussions

[GMDD]

Interactive
comment

Interactive comment on "Computing Climate-Smart Urban Land Use with the Integrated Urban Complexity Model (IUCm 1.0)" *by* Roger Cremades and Philipp Sommer

Anonymous Referee #1

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- The motivation of the paper is clearly described, and the overall approach is very clear, interesting and contributes to an important discussion Some minor points: - Motivation: the overall energy consumption of cities is mentioned, but not the energy consumption of urban mobility - why? - potential deficits of the methodology could be mentioned more clearly (i.e. that it is yet a very generic model not incorporating local contexts, personal preferences of inhabitants (do they want to live where the model proposes?), how likely is that the required data can be made available in case of practical application?) - case study selection: please justify the case-study selection (i.e. why Frankfurt)? Practical reasons, data availability, ... see literature such as Flyvbjerg (2006): Five Misunderstandings About Case Study Research) In this case, I assume

practical reasons? - Reproducibility: discuss where potential data sources for your model exist so that it can be used by cities easily. Where do such data exist hitherto - and where not? Can they be obtained globally by remote sensing in the future? - please perform a more deep reality check of your policy recommendations: can there be a step-wise approach? can you do cost-benefit-analysis to suggest where urban transformation should first take place? - if possible, discuss if your results can also hold with new mobility options such as automated shared-vehicles that have different energy consumption levels.

Interactive comment on Geosci. Model Dev. Discuss., https://doi.org/10.5194/gmd-2018-89, 2018.