

Interactive comment on “Short communication: Landlab v2.0: A software package for Earth surface dynamics” by Katherine R. Barnhart et al.

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Barnhart and co-authors present Landlab v2.0 – a community-based Earth surface dynamics model. Their toolkit is shared as an entirely open software on GitHub, allowing for enhanced collaboration and reproducibility of scientific research.

Since the seminal work presented in Hobley et al. 2017 (Landlab v1.0), a growing number of “teachers-students”, “users”, “user-developers” have started working with the code. The uptake by the community has promoted the development of several new modules (“components”) allowing to study a variety of core surface processes unmatched by any other equivalent tools in Earth surface science.

Motivated by (1) capabilities extension (i.e., model grids, utilities, components), (2)

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users experience and feedbacks and (3) compatibility with required Python libraries (e.g., decommissioning of Python 2), this communication comprehensively describes the new and major changes that have been undertaken between v1.0 and v2.0 in a way that mirrors the clean and well-written code base.

In addition to the technical section of the paper, I really enjoyed reading the section 5 which I think is a must read for any developer/user looking at building, improving working with scientific codes. The amount of work behind the thorough inclusion of docstrings, unit tests, automatic documentation and integration to the wider range of CSDMS suite of tools is for sure a difficult task that is tremendously time-consuming.

I congratulate the authors and all Landlab contributors for providing the community with such infrastructure. In my opinion the article is ready for publication. And I strongly recommend acceptance of this short communication to the journal.

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