

ISIMIP3a land use data

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Introduction

1981–1990

The plan

Outline

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The situation

- currently the land use data provided by ISIMIP3a is based on the Hurtt group's LUH2-GCB2018 data set (from 2018)
- it covers the years up to, and including, 2018
- however, due to new climate data the ISIMIP3a time frame is extended to 2019, the year 2019 needs to be added
- meanwhile the Hurtt group has produced new versions
- the newest one, from 2021, runs up to 2021, but also has updates for the years 2018 and earlier

The new land use data from 2021

LUH2-GCB data for the past is a harmonization of various data sets, but is mostly based on HYDE. According to the Hurtt group

- LUH2-GCB2021 is based on a **completely new version of HYDE**
- this new version of HYDE includes more remote sensing data
- FAO data is more frequently used
- Brazil has seen fixes for croplands and grazing
- global aggregates are very similar in both versions
- the new HYDE data is not yet public

We see changes in the data starting in 1850.

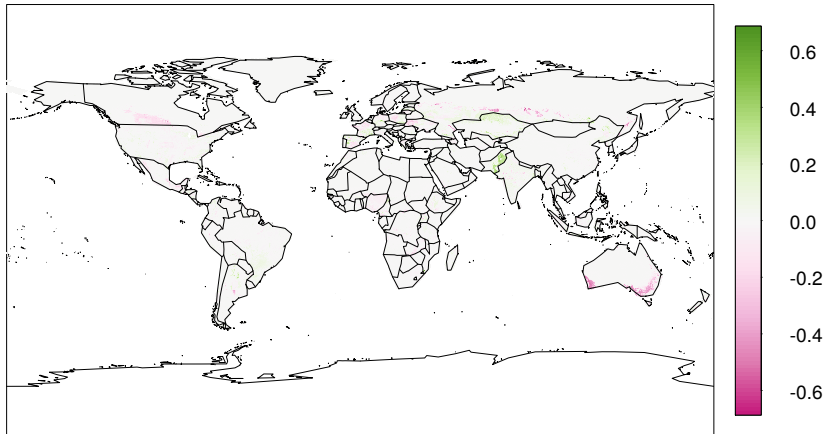
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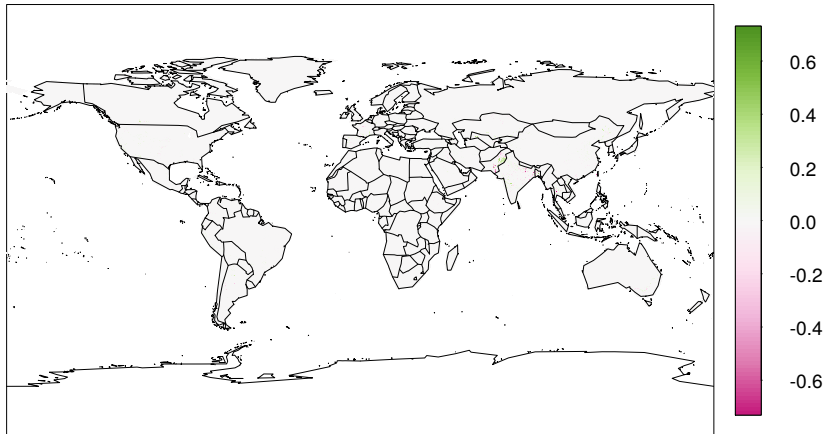
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Croplands



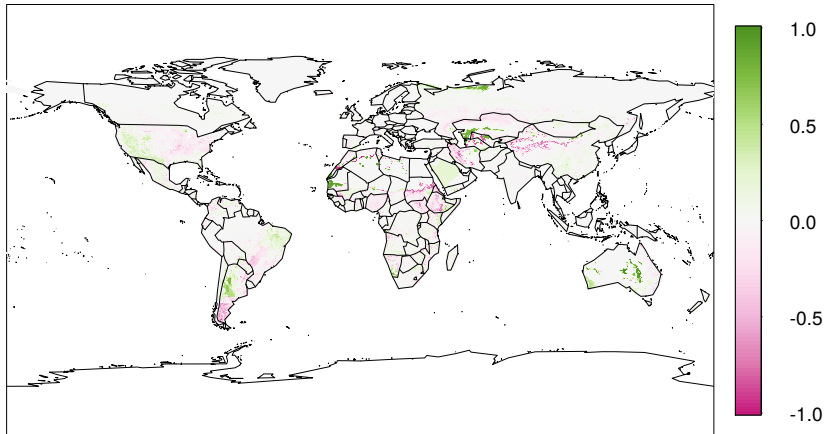
Difference in share per grid cell (ver2021–ver2018) for **total croplands** (mean of 1981–1990).

Croplands



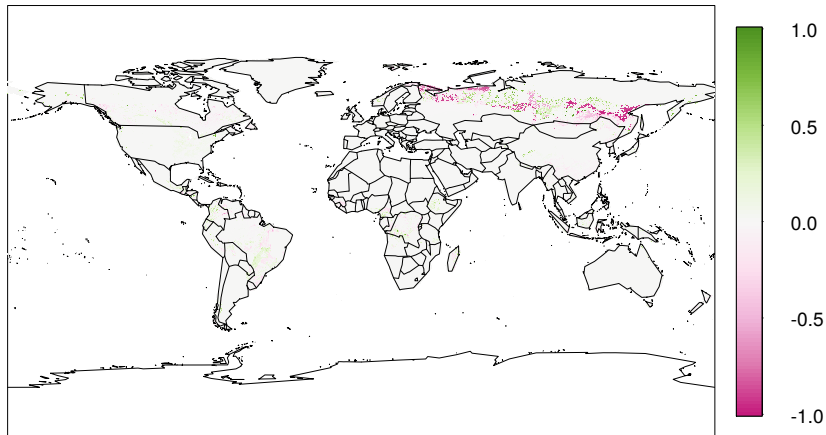
Difference in share per grid cell ($\text{ver2021} - \text{ver2018}$) for **irrigated croplands** (mean of 1981–1990).

Pastures



Difference in share per grid cell (ver2021-ver2018) for **pastures (managed pastures + rangeland)** (mean of 1981-1990).

Forests



Difference in share per grid cell (ver2021-ver2018) for **primary forests** (mean of 1981-1990).

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- don't change the standard ISIMIP3a setting, use LUH2-GCB2018 with constant extension to 2019, but add a sensitivity experiment based on LUH2-GCB2021
- ISIMIP3b will not be touched in any case