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Supplement of

Potential impact of climate and socioeconomic changes on future agricultural land use in West Africa

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Table S1: Present-day (SPAM 2005) and the LandPro-projected future (mid-21st century) average crop area coverage in the West African countries.

<table>
<thead>
<tr>
<th>Country</th>
<th>Present-day coverage (%)</th>
<th>Future coverage (%)</th>
<th>MIROC-driven climate</th>
<th>CESM-driven climate</th>
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Table S2: Future average crop area coverage in the West African countries under the MIROC-driven climate as projected by the LandPro algorithm following three different orders of yield values in selecting the cropping area to optimize agricultural land use. Initial scenario (best case in land use optimization): descending order of yield; alternative scenario 01 (worst case): ascending order; alternative scenario 02 (intermediate case): random order.

<table>
<thead>
<tr>
<th>Country</th>
<th>Future coverage (%)</th>
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<td>Worst case</td>
<td>Intermediate case</td>
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Table S3: Future average crop area coverage in the West African countries under the MIROC-driven climate as projected by the LandPro algorithm following four different rankings of crops prioritized by the farmers to optimize agricultural land use. Rank 1: descending order of country-level crop deficit; rank 2: ascending order of country-level crop deficit; rank 3: maize, sorghum, millet, cassava, peanut; rank 4: peanut, cassava, millet, sorghum, maize.

<table>
<thead>
<tr>
<th>Country</th>
<th>Future Coverage (%)</th>
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<td>Rank 1</td>
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<td>Togo</td>
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</table>
Figure S1: Time-series (2005-2050) of total demand and local production of maize in Nigeria according to future projection by the IMPACT model.
Figure S2: Sensitivity of land use change pattern to the demand values used as input to LandPro with the alternative cropping scenario following ascending order of yield under the MIROC-driven climate. 1st row: absolute magnitude of total change for three future scenarios of demand; 2nd row: change due to socioeconomic factors; 3rd row: change due to climatic factors; 4th row: fraction of climate-induced change to total change.