**Supplementary Information (for review)**

Table S1. Yield Gap Atlas historical maize yields (Ya) and simulated potential water constrained maize yields (Yw) by survey and location: lower bound threshold set at 10% of Ya and upper bound set at Yw

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Survey | Location | Ya (t ha-1) | Lower threshold (t ha-1) | Upper threshold / Yw(t ha-1) |
| ImpactLite-RHoMIS | Lushoto, Tanzania | 2.22 | 0.22 | 12.80 |
| ImpactLite-RHoMIS | Wote, Kenya | 1.52 | 0.15 | 5.82 |
| ImpactLite-RHoMIS | Nyando, Kenya | 2.02 | 0.20 | 11.97 |
| LSMS-ISA | Northern, Uganda | 0.65 | 0.07 | 3.89 |
| LSMS-ISA | Eastern, Uganda | 1.31 | 0.13 | 6.78 |
| LSMS-ISA | Kampala, Uganda | 1.31 | 0.13 | 6.78 |
| LSMS-ISA | Central without Kampala, Uganda | 1.31 | 0.13 | 6.78 |
| LSMS-ISA | Western, Uganda | 1.12 | 0.12 | 2.64 |

Table S2. Crop price thresholds by survey and site (USD kg-1)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Survey | Location | Reported price (mean) | Lower threshold | Upper threshold: Wholesale market price (max)\* |
| ImpactLite 2012 | Lushoto, Tanzania | 0.25 | 0.03 | 0.37 |
| ImpactLite 2012 | Wote, Kenya | 0.36 | 0.04 | 0.37 |
| ImpactLite 2012 | Nyando, Kenya | 0.43 | 0.04 | 0.37 |
| RHoMIS 2015/16 | Lushoto, Tanzania | 0.50 | 0.05 | 0.51 |
| RHoMIS 2015/16 | Wote, Kenya | 0.34 | 0.03 | 0.51 |
| RHoMIS 2015/16 | Nyando, Kenya | 0.48 | 0.05 | 0.51 |
| LSMS-ISA 2010/11 | Northern, Uganda | 0.25 | 0.03 | 0.28 |
| LSMS-ISA 2010/11 | Eastern, Uganda | 0.21 | 0.02 | 0.28 |
| LSMS-ISA 2010/11 | Kampala, Uganda | 0.18 | 0.02 | 0.28 |
| LSMS-ISA 2010/11 | Central without Kampala, Uganda | 0.21 | 0.02 | 0.28 |
| LSMS-ISA 2010/11 | Western, Uganda | 0.20 | 0.02 | 0.28 |

\* Kenya and Tanzanian markets combined

Table S3. Summary of variables assessed in consistency analysis for ImpactLite-RHoMIS and LSMS-ISA in Uganda (difference between end term and baseline – mean, Inter-Quartile Range (IQR), minimum and Maximum)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Survey | Median | IQR | Min | Max |
| Age of household head | ImpactLite-RHoMIS | 1 | 3 | -55 | 44 |
|  | LSMS-ISA | 0 | 0 | -66 | 38 |
| Household size (Adult eq) | ImpactLite-RHoMIS | -0.10 | 1.71 | -6.20 | 13.74 |
|  | LSMS-ISA | 0.70 | 1.18 | -0.67 | 11.11 |
| Livestock holdings (TLU) | ImpactLite-RHoMIS | 0.00 | 2.91 | -20.87 | 17.31 |
|  | LSMS-ISA | 0.00 | 0.55 | -560,001.00 | 47.80 |
| Land owned (ha) | ImpactLite-RHoMIS | 0.30 | 1.31 | -13.55 | 22.88 |
|  | LSMS-ISA | 0 | 0.71 | -113.90 | 40.06 |
| Off-farm income (USD) | ImpactLite-RHoMIS | -28 | 565 | -8,280 | 63,504 |
|  | LSMS-ISA | 0 | 400 | -644,174 | 897,953 |
| Food availability (kcal) | ImpactLite-RHoMIS | 3,088 | 13,448 | -53,448 | 2,676,413 |
|  | LSMS-ISA | -401 | 9,029 | -27,817,219 | 3,124,490 |