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## Supplementary Table 1: Survey overview and sample size

### Unweighted statistics (Sample)

| Country    | Survey Name                          | Survey Year | Non-agriculture households | Fishing households | Agriculture Households | Total        | % of non-agriculture households | % of fishing households | % of agriculture households |
|------------|--------------------------------------|-------------|-----------------------------|--------------------|------------------------|--------------|---------------------------------|------------------------|--------------------------|
| Malawi     | Fourth Integrated Household Survey   | 2016-2017   | 2,096                       | 414                | 9,937                  | 12,447       | 16.8%                           | 3.3%                   | 79.8%                    |
| Tanzania   | National Panel Survey, Wave 4        | 2014-2015   | 1,115                       | 136                | 2,101                  | 3,352        | 33.3%                           | 4.1%                   | 62.7%                    |
| Uganda     | National Panel Survey                | 2010-2011   | 594                         | 76                 | 2,246                  | 2,916        | 20.4%                           | 2.6%                   | 77.0%                    |
| **Total**  |                                      |             | 3,805                       | 626                | 14,284                 | 18,715       | 20.3%                           | 3.3%                   | 76.3%                    |

### Weighted statistics (using probability sampling weights)

| Country    | Survey Name                          | Survey Year | Non-agriculture households | Fishing households | Agriculture Households | Total        | % of non-agriculture households | % of fishing households | % of agriculture households |
|------------|--------------------------------------|-------------|-----------------------------|--------------------|------------------------|--------------|---------------------------------|------------------------|--------------------------|
| Malawi     | Fourth Integrated Household Survey   | 2016-2017   | 661,378                     | 88,865             | 3,047,071              | 3,797,313    | 17.4%                           | 2.3%                   | 80.2%                    |
| Tanzania   | National Panel Survey, Wave 4        | 2014-2015   | 2,559,630                   | 429,097            | 7,161,940              | 10,150,667   | 25.2%                           | 4.2%                   | 70.6%                    |
| Uganda     | National Panel Survey                | 2010-2011   | 1,325,739                   | 133,244            | 3,669,974              | 5,128,957    | 25.8%                           | 2.6%                   | 71.6%                    |
| **Total**  |                                      |             | 4,546,746                   | 651,205            | 13,878,985             | 19,076,937   | 23.8%                           | 3.4%                   | 72.8%                    |

### Overview of the LSMS surveys used in the study in Sub-Saharan Africa

| Country    | Survey Name                          | Survey Year | Total Sample Households |
|------------|--------------------------------------|-------------|-------------------------|
| Malawi     | Fourth Integrated Household Survey   | 2016-2017   | 12,447                  |
| Tanzania   | National Panel Survey, Wave 4        | 2014-2015   | 3,352                   |
| Uganda     | National Panel Survey                | 2010-2011   | 2,916                   |
| **Total**  |                                      |             | 18,715                  |

1. Sample size corresponds to the total number of households sampled in the survey. Due to missing predictors or outliers, the final number of households including in the probit regression are slightly less than the total number of households included in the descriptive statistics (18,610 households in the probit regression (see Table 1 and 2)).
**Supplementary Table 1a** Estimated probability to be income poor (living below the national poverty line) by quintile of distance to water bodies.

| Quintile of distance to water bodies | All countries | Malawi | Tanzania | Uganda |
|-------------------------------------|--------------|--------|----------|--------|
|                                     | National     | Rural  | National | Rural |
|                                     | Prob. to be poor | Dist. | Prob. to be poor | Dist. | Prob. to be poor | Dist. | Prob. to be poor | Dist. |
| 1                                   | *100 Km | 0.339 | 0.454 | 0.448 | 0.465 | 0.371 | 0.384 | 0.193 | 0.389 |
| 2                                   | 0.488 | 0.288 | 0.431 | 0.546 | 0.485 | 0.536 | 0.563 | 0.571 | 0.473 |
| 3                                   | 0.473 | 0.373 | 0.395 | 0.546 | 0.465 | 0.531 | 0.568 | 0.458 | 0.402 |
| 4                                   | 0.478 | 0.427 | 0.495 | 0.547 | 0.466 | 0.533 | 0.568 | 0.463 | 0.460 |
| 5                                   | 0.478 | 0.491 | 0.571 | 0.571 | 0.466 | 0.531 | 0.568 | 0.463 | 0.460 |
| Mean                                | 0.384 | 0.478 | 0.507 | 0.478 | 0.466 | 0.507 | 0.466 | 0.507 | 0.466 |

| Obs. | 18,623 | 12,444 | 3,344 | 1,978 | 2,822 | 2,125 |

Note: For each household, the estimated probability to be income poor is calculated as: \( \Pr(Poor_i = 1) = \Phi(\beta X_i) + e_i \), where \( \Phi \) is the cumulative normal distribution, \( X_i \) is the data vector consisting of observable characteristics for the i-th household, including the distance to water bodies, and \( \beta \) is the vector of coefficient estimates reported in Table 1A. Finally, \( e_i \) is the model error term.
Supplementary Table 1b: Estimated probability to be food insecure (households with below adequate food consumption scores) by quintile of distance to water bodies.

| Quintile of distance to water bodies | All countries | Malawi | Tanzania | Uganda |
|-------------------------------------|--------------|--------|----------|--------|
|                                     | National     | Rural  | National | Rural  | National | Rural  | National | Rural  |
|                                     | *100 Km      | *100 Km | *100 Km  | *100 Km | *100 Km  | *100 Km | *100 Km  | *100 Km |
| 1                                   | 0.206        | 0.268  | 0.609    | 0.643   | 0.124    | 0.156   | 0.151    | 0.155   |
|                                     | 2.7          | 3.3    | 4.0      | 3.1     | 2.2      | 3.4     | 3.5      | 3.6     |
| 2                                   | 0.216        | 0.279  | 0.533    | 0.654   | 0.184    | 0.219   | 0.165    | 0.143   |
|                                     | 11.8         | 15.7   | 18.4     | 18.2    | 10.5     | 17.1    | 10.8     | 13.1    |
| 3                                   | 0.282        | 0.299  | 0.479    | 0.636   | 0.210    | 0.254   | 0.163    | 0.167   |
|                                     | 26.3         | 31.3   | 35.8     | 36.6    | 25.5     | 32.9    | 20.5     | 25.9    |
| 4                                   | 0.311        | 0.340  | 0.577    | 0.627   | 0.256    | 0.287   | 0.167    | 0.163   |
|                                     | 44.7         | 48.3   | 50.7     | 52.6    | 45.5     | 50.3    | 37.7     | 41.7    |
| 5                                   | 0.332        | 0.391  | 0.550    | 0.604   | 0.277    | 0.326   | 0.223    | 0.255   |
|                                     | 79.3         | 80.9   | 74.3     | 75.2    | 85.9     | 88.6    | 68.5     | 71.6    |
| Mean                                | 0.270        | 0.315  | 0.549    | 0.633   | 0.210    | 0.338   | 0.174    | 0.177   |
|                                     | 33.1         | 36.0   | 37.0     | 37.1    | 38.0     | 38.0    | 28.5     | 31.2    |
| Obs.                                | 18,623       | 14,283 | 12,444   | 10,174  | 3,344    | 1,971   | 2,822    | 2,125   |

Note: For each household, the estimated probability to be food insecure was calculated as: \( Pr(Poor_i = 1) = \Phi(\beta X_i) + e_i \), where \( \Phi \) is the cumulative normal distribution, \( X_i \) is the data vector consisting of observable characteristics for the i-th household, including the distance to water bodies, and \( \beta \) is the vector of coefficient estimates reported in Table 1B. Finally, \( e_i \) is the model error term.
## Main variables used for the econometric analysis (unweighted statistics)

| VARIABLES                                      | Measure                  | Malawi mean | Malawi sd | Tanzania mean | Tanzania sd | Uganda mean | Uganda sd | All countries mean | All countries sd |
|------------------------------------------------|--------------------------|-------------|-----------|---------------|-------------|-------------|-----------|--------------------|-----------------|
| **Poor household**                             | % of total household     | 0.447       | 0.497     | 0.426         | 0.495       | 0.217       | 0.412     | 0.408              | 0.491           |
| **Food consumption profile**                   |                          |             |           |               |             |             |           |                    |                 |
| Poor                                           | 1 poor; 0 otherwise      | 0.143       | 0.35      | 0.0418        | 0.2         | 0.0432      | 0.203     | 0.109              | 0.312           |
| Borderline                                     | 1 borderline; 0 otherwise| 0.385       | 0.487     | 0.147         | 0.354       | 0.124       | 0.33      | 0.302              | 0.459           |
| Acceptable                                     | 1 acceptable; 0 otherwise| 0.472       | 0.499     | 0.811         | 0.391       | 0.832       | 0.374     | 0.589              | 0.492           |
| Rural households                               | % of total households    | 0.817       | 0.386     | 0.592         | 0.492       | 0.746       | 0.436     | 0.766              | 0.423           |
| Age of the head of the household               | Age                      | 43.29       | 16.19     | 44.42         | 14.99       | 45.11       | 15.22     | 43.77              | 15.84           |
| Sex of the head of the household               | 1 male; 0 female         | 0.713       | 0.452     | 0.715         | 0.451       | 0.719       | 0.45      | 0.714              | 0.452           |
| Household size                                 | number of household members | 4.329     | 2.001     | 4.858         | 2.849       | 6.322       | 3.327     | 4.734              | 2.519           |
| **Education of the head of the household**     |                          |             |           |               |             |             |           |                    |                 |
| Primary education                              | 1 primary education; 0 otherwise | 0.679   | 0.467     | 0.232         | 0.422       | 0.24        | 0.427     | 0.531              | 0.499           |
| Secondary education                            | 1 Secondary education; 0 otherwise | 0.199  | 0.399     | 0.553         | 0.497       | 0.524       | 0.5        | 0.313              | 0.464           |
| Tertiary education                             | 1 Tertiary education; 0 otherwise | 0.104  | 0.305     | 0.199         | 0.4         | 0.178       | 0.382     | 0.133              | 0.339           |
| Not stated                                     |                           | 0.0177      | 0.132     | 0.0155        | 0.124       | 0.058       | 0.234     | 0.0235             | 0.152           |
| Distance to nearest agriculture markets        | Km                       | 22.45       | 17.26     | 29.32         | 20.14       | 23.76       | 18.04     | 29.32              | 20.14           |
| Distance to water bodies                       | Km                       | 41.67       | 29.34     | 29.48         | 32.97       | 30.39       | 28.88     | 37.73              | 30.46           |
| Wealth index                                   | Score                    | 1.62        | 2.194     | 53.63         | 52.79       | 1.606       | 1.259     | 10.93              | 30              |
| Total months hh experienced food insecurity    | Months per year          | 3.084       | 3.096     | 1.279         | 2.167       | 1.659       | 2.549     | 2.539              | 2.972           |
| Household unable to reach food markets         | 1 unable; 0 otherwise    | 0.00426     | 0.0651    | 0.00239       | 0.0488      | 0.0972      | 0.296     | 0.0183             | 0.134           |
| Households with cultivated and/or owned land   | 1 households with cultivated/or owned | 0.78     | 0.415     | 0.624         | 0.485       | 0.584       | 0.493     | 0.721              | 0.448           |
| Employed households member                     | Employed over not employed | 0.405 | 0.307     | 0.475         | 0.288       | 0.508       | 0.255     | 0.433              | 0.299           |
| Household consumed fish in past 7 days         | Household reporting to consume fish | 0.731   | 0.443     | 0.75          | 0.433       | 0.358       | 0.48      | 0.677              | 0.468           |
Supplementary Table 3a Fish and other animal-source food consumption by proximity to water bodies

| Food Item | Measure | National | Rural | Urban |
|-----------|---------|----------|-------|-------|
|           | >5 Km. | <=5 Km | Total | >5 Km. | <=5 Km | Total | >5 Km. | <=5 Km | Total |
| Fish      | Kg. per household per week | 0.80*** 1.59*** 0.9 | 0.62*** 1.62*** 0.77 | 1.34 | 1.47 | 1.35 |
| Fish      | share of HHs who consumed over 7 days (*100) | 0.72*** 0.89*** 0.73 | 0.67*** 0.88*** 0.7 | 0.89 | 0.93 | 0.89 |
| Poultry   | Kg. per household per week | 1.67*** 2.90*** 1.77 | 1.51*** 3.06*** 1.71 | 1.97*** 2.24*** 1.99 |
| Poultry   | share of HHs who consumed over 7 days (*100) | 0.13*** 0.77*** 0.73 | 0.09*** 0.95*** 0.99 | 0.31*** 0.13*** 0.3 |
| Poultry   | Number of days consumed (out of 7) | 0.04*** 0.02*** 0.08 | 0.05*** 0.03*** 0.05 | 0.21*** 0.06*** 0.2 |
| Goat      | Kg. per household per week | 0.95 0.93 0.95 | 0.94 0.93 0.94 | 0.98 | 0.9 | 0.97 |
| Goat      | share of HHs who consumed over 7 days (*100) | 0.14*** 0.08*** 0.13 | 0.12*** 0.07*** 0.11 | 0.22*** 0.14*** 0.22 |
| Goat      | Number of days consumed (out of 7) | 0.28*** 0.12*** 0.26 | 0.26*** 0.11*** 0.24 | 0.34*** 0.17*** 0.32 |
| Pork      | Kg. per household per week | 0.71*** 0.96*** 0.72 | 0.69*** 0.96*** 0.7 | 0.79 | 0.95 | 0.8 |
| Pork      | share of HHs who consumed over 7 days (*100) | 0.07*** 0.02*** 0.07 | 0.07*** 0.02*** 0.06 | 0.09*** 0.03*** 0.08 |
| Pork      | Number of days consumed (out of 7) | 0.12*** 0.02*** 0.11 | 0.12*** 0.02*** 0.11 | 0.11*** 0.03*** 0.1 |
| Beef      | Kg. per household per week | 1.09 1.12 1.09 | 1.02 1.11 1.03 | 1.13 | 1.13 | 1.13 |
| Beef      | share of HHs who consumed over 7 days (*100) | 0.10*** 0.06*** 0.09 | 0.05 0.04 0.05 | 0.31*** 0.17*** 0.3 |
| Beef      | Number of days consumed (out of 7) | 0.20*** 0.11*** 0.19 | 0.1 0.08 0.1 | 0.52*** 0.27*** 0.5 |
| Eggs      | Kg. per household per week | 0.40*** 0.37*** 0.4 | 0.35 0.36 0.35 | 0.49*** 0.40*** 0.49 |
| Eggs      | share of HHs who consumed over 7 days (*100) | 0.32*** 0.24*** 0.31 | 0.24*** 0.21*** 0.23 | 0.65*** 0.43*** 0.63 |
| Eggs      | Number of days consumed (out of 7) | 0.41*** 0.23*** 0.38 | 0.32*** 0.20*** 0.31 | 0.67*** 0.38*** 0.65 |

Malawi
| Food Item | Measure | National | Rural | Urban |
|-----------|---------|----------|-------|-------|
|           |         | >5 Km. | <=5 Km | Total | >5 Km. | <=5 Km | Total | >5 Km. | <=5 Km | Total |
| Fish      | Kg. per household per week | 1.47 | 1.49 | 1.47 | 1.44 | 1.53 | 1.46 | 1.52 | 1.36 | 1.5 |
| Fish      | share of HHs who consumed over 7 days (*100) | 0.31*** | 0.46*** | 0.33 | 0.29*** | 0.47*** | 0.31 | 0.39 | 0.43 | 0.4 |
| Fish      | Number of days consumed (out of 7) | 1.11*** | 2.31*** | 1.3 | 1.15*** | 2.67*** | 1.4 | 1.04*** | 1.36** | 1.09 |
| Poultry   | Kg. per household per week | 1.67*** | 1.14** | 1.56 | 1.94** | 1.12** | 1.74 | 1.51 | 1.16 | 1.45 |
| Poultry   | share of HHs who consumed over 7 days (*100) | 0.02 | 0.04 | 0.03 | 0.01 | 0.02 | 0.01 | 0.06 | 0.09 | 0.07 |
| Poultry   | Number of days consumed (out of 7) | 0.18 | 0.17 | 0.18 | 0.15 | 0.17 | 0.16 | 0.22 | 0.18 | 0.22 |
| Goat      | Kg. per household per week | 1.09 | 0.91 | 1.06 | 1.09* | 0.76* | 1.03 | 1.07** | 2.07** | 1.16 |
| Goat      | share of HHs who consumed over 7 days (*100) | 0.04 | 0.05 | 0.04 | 0.04 | 0.06 | 0.05 | 0.04 | 0.02 | 0.04 |
| Goat      | Number of days consumed (out of 7) | 0.12 | 0.13 | 0.12 | 0.14 | 0.15 | 0.14 | 0.09 | 0.06 | 0.08 |
| Pork      | Kg. per household per week | 1.08 | 0.95 | 1.06 | 1.1 | 0.95 | 1.08 | 0.95 | 1.01 | 0.96 |
| Pork      | share of HHs who consumed over 7 days (*100) | 0.06** | 0.03** | 0.06 | 0.07** | 0.04** | 0.06 | 0.04 | 0.01 | 0.03 |
| Pork      | Number of days consumed (out of 7) | 0.18** | 0.07*** | 0.16 | 0.07*** | 0.09*** | 0.19 | 0.1 | 0.03 | 0.09 |
| Beef      | Kg. per household per week | 1.42 | 1.39 | 1.42 | 1.3 | 1.36 | 1.31 | 1.65 | 1.44 | 1.63 |
| Beef      | share of HHs who consumed over 7 days (*100) | 0.32*** | 0.21*** | 0.3 | 0.27*** | 0.18*** | 0.26 | 0.46*** | 0.28*** | 0.43 |
| Beef      | Number of days consumed (out of 7) | 1.07*** | 0.60*** | 0.99 | 0.94*** | 0.53*** | 0.87 | 1.34*** | 0.78*** | 1.26 |
| Eggs      | Kg. per household per week | 0.42 | 0.45 | 0.43 | 0.35 | 0.36 | 0.35 | 0.49 | 0.52 | 0.5 |
| Eggs      | share of HHs who consumed over 7 days (*100) | 0.09 | 0.09 | 0.09 | 0.06 | 0.05 | 0.06 | 0.19 | 0.2 | 0.19 |
| Eggs      | Number of days consumed (out of 7) | 0.59 | 0.53 | 0.58 | 0.4 | 0.27 | 0.38 | 1 | 1.22 | 1.03 |

All countries

| Food Item | Measure | National | Rural | Urban |
|-----------|---------|----------|-------|-------|
|           |         | >5 Km. | <=5 Km | Total | >5 Km. | <=5 Km | Total | >5 Km. | <=5 Km | Total |
| Fish      | Kg. per household per week | 0.86*** | 1.74*** | 1.04 | 0.79*** | 1.88*** | 0.98 | 1.00*** | 1.54*** | 1.15 |
| Fish      | share of HHs who consumed over 7 days (*100) | 0.59*** | 0.75*** | 0.61 | 0.56*** | 0.73*** | 0.58 | 0.68*** | 0.77*** | 0.7 |
| Fish      | Number of days consumed (out of 7) | 1.54*** | 2.90*** | 1.79 | 1.54*** | 3.20*** | 1.8 | 1.52*** | 2.49*** | 1.76 |
| Poultry   | Kg. per household per week | 1.11 | 1.16 | 1.12 | 1.23 | 1.24 | 1.24 | 0.91*** | 1.09*** | 0.96 |
| Poultry   | share of HHs who consumed over 7 days (*100) | 0.12** | 0.14** | 0.12 | 0.1 | 0.11 | 0.1 | 0.18 | 0.18 | 0.18 |
| Poultry   | Number of days consumed (out of 7) | 0.26 | 0.28 | 0.27 | 0.26 | 0.25 | 0.26 | 0.27** | 0.32** | 0.28 |
| Goat      | Kg. per household per week | 1 | 1.02 | 1 | 1.02 | 1.06 | 1.02 | 0.93 | 0.91 | 0.93 |
| Goat      | share of HHs who consumed over 7 days (*100) | 0.11*** | 0.08*** | 0.1 | 0.12*** | 0.09*** | 0.11 | 0.09*** | 0.06*** | 0.08 |
| Goat      | Number of days consumed (out of 7) | 0.26*** | 0.14*** | 0.24 | 0.30*** | 0.18*** | 0.28 | 0.17*** | 0.08*** | 0.14 |
| Pork      | Kg. per household per week | 0.67 | 0.95 | 0.87 | 0.87 | 0.85 | 0.87 | 0.85** | 1.15** | 0.88 |
| Pork      | share of HHs who consumed over 7 days (*100) | 0.06*** | 0.02*** | 0.05 | 0.06*** | 0.02*** | 0.05 | 0.04*** | 0.02*** | 0.04 |
| Pork      | Number of days consumed (out of 7) | 0.11*** | 0.03*** | 0.09 | 0.13*** | 0.03*** | 0.11 | 0.07*** | 0.03*** | 0.06 |
| Beef      | Kg. per household per week | 1.15 | 1.11 | 1.15 | 1.13 | 1.13 | 1.13 | 1.18 | 1.11 | 1.16 |
| Beef      | share of HHs who consumed over 7 days (*100) | 0.31*** | 0.34*** | 0.31 | 0.23** | 0.21** | 0.22 | 0.54 | 0.52 | 0.54 |
| Beef      | Number of days consumed (out of 7) | 0.76* | 0.72* | 0.75 | 0.57*** | 0.39*** | 0.55 | 1.21 | 1.16 | 1.2 |
| Eggs      | Kg. per household per week | 0.40** | 0.43** | 0.4 | 0.34*** | 0.37*** | 0.34 | 0.47 | 0.47 | 0.47 |
| Eggs      | share of HHs who consumed over 7 days (*100) | 0.19* | 0.18* | 0.19 | 0.15** | 0.13** | 0.14 | 0.33*** | 0.25*** | 0.31 |
| Eggs      | Number of days consumed (out of 7) | 0.31*** | 0.23*** | 0.3 | 0.23*** | 0.16*** | 0.22 | 0.50*** | 0.34*** | 0.46 |

* significant at 10%; ** significant at 5%; *** significant at 1%
| Food item | Measure | National | <5Km | >=5Km |
|-----------|---------|----------|------|-------|
|          |         | Non-poor | Poor | Total | Non-poor | Poor | Total | Non-poor | Poor | Total |
| Fish     | Kg. per household per week | 1.08*** | 0.62*** | 0.9   | 1.83*** | 1.31*** | 1.59 | 0.98*** | 0.50*** | 0.8   |
| Fish     | share of HHs who consumed over 7 days (*100) | 0.82*** | 0.63*** | 0.73  | 0.93*** | 0.85*** | 0.89 | 0.81*** | 0.60*** | 0.72  |
| Fish     | Number of days consumed (out of 7) | 1.79*  | 1.74*  | 1.77  | 2.93    | 2.85   | 2.9  | 1.66*** | 1.56*** | 1.62  |
| Poultry  | Kg. per household per week | 0.31*** | 0.15*** | 0.29  | 0.22    | 0.3     | 0.23 | 0.31*** | 0.14*** | 0.3   |
| Poultry  | share of HHs who consumed over 7 days (*100) | 0.21*** | 0.03*** | 0.13  | 0.11*** | 0.02*** | 0.07 | 0.27*** | 0.03*** | 0.14  |
| Poultry  | Number of days consumed (out of 7) | 0.11*** | 0.02*** | 0.08  | 0.03*** | 0.01*** | 0.02 | 0.12*** | 0.03*** | 0.09  |
| Goat     | Kg. per household per week | 0.96*** | 0.88*** | 0.95  | 0.93    | 0.93    | 0.93 | 0.97*** | 0.88**  | 0.95  |
| Goat     | share of HHs who consumed over 7 days (*100) | 0.21*** | 0.04*** | 0.13  | 0.12*** | 0.03*** | 0.08 | 0.22*** | 0.05*** | 0.14  |
| Goat     | Number of days consumed (out of 7) | 0.36*** | 0.10*** | 0.26  | 0.18*** | 0.05*** | 0.12 | 0.38*** | 0.11*** | 0.28  |
| Pork     | Kg. per household per week | 0.74**  | 0.63**  | 0.72  | 0.79**  | 1.31**  | 0.96 | 0.74**  | 0.60**  | 0.71  |
| Pork     | share of HHs who consumed over 7 days (*100) | 0.09*** | 0.03*** | 0.07  | 0.02    | 0.01    | 0.02 | 0.10*** | 0.03*** | 0.07  |
| Pork     | Number of days consumed (out of 7) | 0.14*** | 0.06*** | 0.11  | 0.02    | 0.02    | 0.02 | 0.15*** | 0.07*** | 0.12  |
| Beef     | Kg. per household per week | 1.10*** | 0.92*** | 1.09  | 1.12    | 1.05    | 1.12 | 1.10*** | 0.91*** | 1.09  |
| Beef     | share of HHs who consumed over 7 days (*100) | 0.16*** | 0.02*** | 0.09  | 0.10*** | 0.01*** | 0.06 | 0.17*** | 0.02*** | 0.1   |
| Beef     | Number of days consumed (out of 7) | 0.28*** | 0.04*** | 0.19  | 0.16*** | 0.04*** | 0.11 | 0.30*** | 0.04*** | 0.2   |
| Eggs     | Kg. per household per week | 0.42*** | 0.31*** | 0.4   | 0.38    | 0.34    | 0.37 | 0.42*** | 0.31*** | 0.4   |
| Eggs     | share of HHs who consumed over 7 days (*100) | 0.47*** | 0.12*** | 0.31  | 0.36*** | 0.11*** | 0.24 | 0.48*** | 0.12*** | 0.32  |
| Eggs     | Number of days consumed (out of 7) | 0.50*** | 0.20*** | 0.38  | 0.31*** | 0.12*** | 0.23 | 0.52*** | 0.21*** | 0.41  |

**Malawi**

**Tanzania**
| Food      | Kg. per household per week | Number of days consumed (out of 7) | share of HHs who consumed over 7 days (*100) | Kg. per household per week | Number of days consumed (out of 7) | share of HHs who consumed over 7 days (*100) |
|-----------|----------------------------|-----------------------------------|---------------------------------------------|----------------------------|-----------------------------------|---------------------------------------------|
| Fish      | 1.57*** 0.93*** 1.47       | 1.28 1.44 1.3                     | 0.03*** 0.01*** 0.03 0.04 0.04 0.04       | 1.62* 0.89* 1.58          | 0.19*** 0.07*** 0.17                | 1.10** 0.57** 1.06                        |
| Poultry   | 1.62* 0.89* 1.58          | 2.32 2.26 2.31                    | 0.02*** 0.01*** 0.03 0.04 0.04 0.04       | 1.28 0.46 1.11           | 0.19*** 0.07*** 0.17                | 0.93 0.44 0.91                           |
| Goat      | 1.10** 0.57** 1.06        | 0.93 0.44 0.91                    | 0.03*** 0.01*** 0.03 0.04 0.04 0.04       | 1.10** 0.72** 1.06        | 0.15* 0.02* 0.13                    | 0.94 1.09 0.95                           |
| Pork      | 1.10** 0.72** 1.06        | 0.02*** 0.01*** 0.03 0.04 0.04 0.04 | 0.13*** 0.06*** 0.12                  | 0.06*** 0.03*** 0.06      | 0.17 0.1 0.16                       | 0.04 0.01 0.03                           |
| Beef      | 1.48*** 0.80*** 1.42      | 0.17 0.1 0.16                     | 0.35*** 0.12*** 0.3                     | 1.07*** 0.46*** 0.99      | 0.07*** 0.01*** 0.09                | 0.63* 0.01*** 0.05                       |
| Eggs      | 0.43 0.22 0.43           | 1.46* 0.89* 1.39                   | 0.11*** 0.01*** 0.09                    | 0.65*** 0.08*** 0.58      | 0.11*** 0.01*** 0.09                | 0.66*** 0.09*** 0.59                      |
| Poultry   | 1.10** 0.57** 1.06        | 0.43 0.22 0.43                     | 0.43 0.23 0.42                         | 0.43 0.22 0.43           | 0.43 0.23 0.42                     | 0.43 0.23 0.42                           |
| Goat      | 1.04*** 0.90*** 1.1          | 0.06*** 0.07*** 0.12               | 0.16*** 0.07*** 0.12                   | 0.16*** 0.07*** 0.12      | 0.16*** 0.07*** 0.12               | 0.16*** 0.07*** 0.12                      |
| Pork      | 1.04*** 0.90*** 1.1          | 0.27*** 0.20*** 0.27               | 0.33*** 0.19*** 0.28                   | 0.27*** 0.20*** 0.27      | 0.33*** 0.19*** 0.28               | 0.33*** 0.19*** 0.28                      |
| Beef      | 0.91*** 0.72*** 0.87        | 0.11*** 0.06*** 0.09               | 0.03*** 0.01*** 0.03                   | 0.06*** 0.03*** 0.05      | 0.03*** 0.01*** 0.03               | 0.03*** 0.01*** 0.03                      |
| Eggs      | 1.18*** 0.96*** 1.15        | 0.43*** 0.14*** 0.31               | 0.43*** 0.14*** 0.31                   | 0.43*** 0.14*** 0.31      | 0.43*** 0.14*** 0.31               | 0.43*** 0.14*** 0.31                      |

- **significant at 10%; ** significant at 5%; *** significant at 1%
- Kg. per household per week: average based on households who reported to consume any food item
- Number of days consumed (out of 7): average based on households who reported to consume at least some Qt. of any food from animal source
| Food Item | Measure | National | <=5Km. | >5Km. |
|----------|---------|---------|--------|-------|
|          |         | Poor    | Borderline | Acceptable | Total | Poor    | Borderline | Acceptable | Total |
| Fish     | Kg. per household per week | 0.40*** | 0.56*** | 1.22*** | 0.9 | 0.86*** | 1.09*** | 2.00*** | 1.59 | 0.36*** | 0.48*** | 1.10*** | 0.8 | --- |
|          | share of HHs who consumed over 7 days (*100) | 0.40*** | 0.71*** | 0.87*** | 0.73 | 0.45*** | 0.89 | 0.98*** | 0.89 | 0.40*** | 0.69*** | 0.86*** | 0.72 | --- |
| Fish     | Number of days consumed (out of 7) | 0.73*** | 1.37*** | 2.23*** | 1.77 | 0.78*** | 2.21*** | 3.57*** | 2.9 | 0.73*** | 1.26*** | 2.04*** | 1.62 | --- |
| Poultry  | Kg. per household per week | 0.16 | 0.14*** | 0.33*** | 0.29 | . | 0.31 | 0.21 | 0.23 | 0.16 | 0.12*** | 0.34*** | 0.3 | --- |
| Poultry  | share of HHs who consumed over 7 days (*100) | 0.02*** | 0.05*** | 0.23*** | 0.13 | 0.00*** | 0.04*** | 0.10*** | 0.07 | 0.02*** | 0.06*** | 0.25*** | 0.14 | --- |
| Poultry  | Number of days consumed (out of 7) | 0.02*** | 0.03*** | 0.13*** | 0.08 | 0.0 | 0.01 | 0.03* | 0.02 | 0.02*** | 0.03*** | 0.14*** | 0.09 | --- |
| Goat     | Kg. per household per week | 0.78*** | 0.90*** | 0.97*** | 0.95 | 1 | 0.84 | 0.94 | 0.93 | 0.77*** | 0.90*** | 0.97*** | 0.95 | --- |
| Goat     | share of HHs who consumed over 7 days (*100) | 0.02*** | 0.07*** | 0.23*** | 0.13 | 0.02*** | 0.03*** | 0.12*** | 0.08 | 0.02*** | 0.08*** | 0.24*** | 0.14 | --- |
| Goat     | Number of days consumed (out of 7) | 0.04*** | 0.12*** | 0.40*** | 0.26 | 0.03* | 0.05*** | 0.18*** | 0.12 | 0.04*** | 0.13*** | 0.44*** | 0.28 | --- |
| Pork     | Kg. per household per week | 0.50*** | 0.63*** | 0.78*** | 0.72 | 0.97 | 0.96 | 0.96 | 0.50** | 0.62*** | 0.77*** | 0.71 | --- |
| Pork     | share of HHs who consumed over 7 days (*100) | 0.02*** | 0.05*** | 0.09*** | 0.07 | 0.00* | 0.02 | 0.03* | 0.02 | 0.02*** | 0.06*** | 0.10*** | 0.07 | --- |
| Pork     | Number of days consumed (out of 7) | 0.03*** | 0.08*** | 0.14*** | 0.11 | 0 | 0.02 | 0.03 | 0.02 | 0.04*** | 0.09*** | 0.16*** | 0.12 | --- |
| Beef     | Kg. per household per week | 0.77 | 0.93*** | 1.12*** | 1.09 | 1 | 0.86*** | 1.17*** | 1.12 | 0.68 | 0.94*** | 1.11*** | 1.09 | --- |
| Beef     | share of HHs who consumed over 7 days (*100) | 0.00*** | 0.03*** | 0.18*** | 0.09 | 0.01*** | 0.03*** | 0.10*** | 0.06 | 0.00*** | 0.03*** | 0.19*** | 0.1 | --- |
| Beef     | Number of days consumed (out of 7) | 0.01*** | 0.05*** | 0.32*** | 0.19 | 0.02* | 0.05*** | 0.15*** | 0.11 | 0.00*** | 0.05*** | 0.35*** | 0.2 | --- |
| Eggs     | Kg. per household per week | 0.25*** | 0.30*** | 0.44*** | 0.4 | 0.35 | 0.27*** | 0.40*** | 0.37 | 0.24*** | 0.30*** | 0.44*** | 0.4 | --- |
| Eggs     | share of HHs who consumed over 7 days (*100) | 0.05*** | 0.18*** | 0.51*** | 0.31 | 0.05*** | 0.13*** | 0.36*** | 0.24 | 0.05*** | 0.19*** | 0.53*** | 0.32 | --- |
| Eggs     | Number of days consumed (out of 7) | 0.08*** | 0.19*** | 0.57*** | 0.38 | 0.10*** | 0.10*** | 0.32*** | 0.23 | 0.08*** | 0.20*** | 0.61*** | 0.41 | --- |

**Food items:** Eggs, Beef, Pork, Goat, Poultry, Fish

**Notes:**
- *p < 0.05
- **p < 0.01
- ***p < 0.001

**Supplementary Table 3c Fish and other animal-source food consumption by proximity to water bodies - by dietary diversity score (food consumption score)**

**Malawi**

**Tanzania**
| Country | Fish Kg. per household per week | Beef Kg. per household per week | Pork Kg. per household per week | Goat Kg. per household per week | Poultry Kg. per household per week | Number of days consumed (out of 7) | share of HHs who consumed over 7 days (*100) |
|---------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-----------------------------------|---------------------------------|
| Uganda  |                                 |                                 |                                 |                                 |                                 |                                   |                                  |
| Fish    | 0.44 0.75*** 1.52*** 1.47       | 0.44 0.37** 1.55** 1.49         | 0.00*** 0.15*** 0.39*** 0.34   | 0.00*** 0.13*** 0.37*** 0.31   | 0.83*** 1.51*** 1.47           | 0 0.73*** 1.34*** 1.3 0 1.12** 2.39** 2.31 | 0 0.00*** 0.19*** 0.17 0 0.00*** 0.18*** 0.17 |
| Fish    | 0.00*** 0.03*** 0.07*** 0.04   | 0.00*** 0.01*** 0.04*** 0.05   | 0.00*** 0.00*** 0.03*** 0.03   | 0 0 0.05* 0.04                 | 0.00** 0.00*** 0.03*** 0.02   | 0 0 0.00*** 0.01*** 0.00*** 0.02 0 0.00*** 0.01*** 0.01*** 0.02 |
| Fish    | 0 0.00*** 0.19*** 0.17         | 0 0 0.18*** 0.17               | 0 0 0.00*** 0.01*** 0.01*** 0.02 | 0 0 0.00*** 0.01*** 0.01*** 0.02 | 0 0 0.00*** 0.01*** 0.01*** 0.02 | 0 0 0.00*** 0.01*** 0.01*** 0.02 |
| Poultry | . . 1.58 1.58                 | . . 1.11 1.11                  | . . 0.91 0.91                  | . . 0.82 1.09 1.09             | . . 0.69 1.09 1.07             | . . 0.82 1.09 1.09 0.69 1.09 1.07 |
| Poultry | 0.00*** 0.00*** 0.00*** 0.00   | 0.00*** 0.00*** 0.00*** 0.00   | 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0.00*** 0.00*** 0.00*** 0.00 |
| Poultry | 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0 0 0.00*** 0.00*** 0.00*** 0.00 |
| Pork    | . . 0.95 0.95                 | . . 0.95 0.95                  | . . 0.95 0.95                  | . . 0.95 0.95                  | . . 0.95 0.95                  | . . 0.95 0.95 0.95 0.95 0.95 |
| Pork    | 0.00*** 0.00*** 0.00*** 0.00   | 0.00*** 0.00*** 0.00*** 0.00   | 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0.00*** 0.00*** 0.00*** 0.00 |
| Pork    | 0 0 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0 0 0.00*** 0.00*** 0.00*** 0.00 |
| Beef    | . . 0.82 1.45*** 1.42         | . . 0.82 1.41 1.39             | . . 0.82 1.41 1.39             | . . 0.82 1.45*** 1.42         | . . 0.82 1.45*** 1.42         | . . 0.82 1.45*** 1.42 |
| Beef    | 0.00*** 0.00*** 0.00*** 0.00   | 0.00*** 0.00*** 0.00*** 0.00   | 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0.00*** 0.00*** 0.00*** 0.00 | 0 0 0.00*** 0.00*** 0.00*** 0.00 |
| Beef    | 0 0.45*** 1.03*** 0.99         | 0 0.45*** 1.03*** 0.99         | 0 0.45*** 1.03*** 0.99         | 0 0.45*** 1.03*** 0.99         | 0 0.45*** 1.03*** 0.99         | 0 0 0.45*** 1.03*** 0.99 0.45 0.08 0.23* 0.44** 0.42 |
| Eggs    | 0.08 0.35 0.43 0.43           | 0.08 0.35 0.43 0.43           | 0.08 0.35 0.43 0.43           | 0.08 0.35 0.43 0.43           | 0.08 0.35 0.43 0.43           | 0.08 0.35 0.43 0.43 0.08 0.23* 0.44** 0.42 |
| Eggs    | 0.01*** 0.04*** 0.11*** 0.09 | 0.01*** 0.04*** 0.11*** 0.09 | 0.01*** 0.04*** 0.11*** 0.09 | 0.01*** 0.04*** 0.11*** 0.09 | 0.01*** 0.04*** 0.11*** 0.09 | 0.01*** 0.04*** 0.11*** 0.09 0.08 0.23* 0.44** 0.42 |
| Eggs    | 0.8 0.31*** 0.60*** 0.58      | 0.8 0.31*** 0.60*** 0.58      | 0.8 0.31*** 0.60*** 0.58      | 0.8 0.31*** 0.60*** 0.58      | 0.8 0.31*** 0.60*** 0.58      | 0.8 0.31*** 0.60*** 0.58 0.8 0.31*** 0.60*** 0.58 |

* significant at 10%; ** significant at 5%; *** significant at 1%
## Supplementary Table 4a Fish consumption - form (dried/fresh) and source (purchased/own production/other) - by proximity to water bodies

| Fish consumption by: | Fish consumption | Indicator | National | Rural | Urban | Malawi |
|----------------------|------------------|----------|----------|-------|-------|--------|
|                      |                  | >5 Km.   | <=5 Km.  | Total | >5 Km. | <=5 Km. | Total |
| Fish consumption     |                  |          |          |       |        |          |       |
| Total fish           | % of total household | 0.72*** | 0.89*** | 0.73  | 0.67*** | 0.88*** | 0.7   | 0.89 | 0.93 | 0.89 |
| Fresh fish           | % of total household who consumed fish | 0.23*** | 0.73*** | 0.28  | 0.16*** | 0.74*** | 0.25  | 0.38*** | 0.70*** | 0.41 |
| Dried fish           | % of total household who consumed fish | 0.74*** | 0.49*** | 0.71  | 0.73*** | 0.49*** | 0.7   | 0.77*** | 0.52*** | 0.75 |
| Other fish           | % of total household who consumed fish | 0.30*** | 0.20*** | 0.28  | 0.26*** | 0.19*** | 0.25  | 0.40*** | 0.27*** | 0.38 |
| Total fish           | Kg. per household /per week | 0.80** | 1.59** | 0.9   | 0.62*** | 1.62*** | 0.77  | 1.34 | 1.47 | 1.35 |
| Fresh fish           | Kg. per household /per week **** | 1.36** | 1.53** | 1.42  | 1.13*** | 1.56*** | 1.32  | 1.67*** | 1.29*** | 1.62 |
| Dried fish           | Kg. per household /per week **** | 0.49** | 0.73** | 0.51  | 0.43*** | 0.73*** | 0.46  | 0.66  | 0.7   | 0.66 |
| Other fish           | Kg. per household /per week **** | 0.46** | 0.60** | 0.49  | 0.46** | 0.57** | 0.47  | 0.51** | 0.74** | 0.53 |
| Source               |                  |          |          |       |        |          |       |
| From purchased       | Kg. per household /per week **** | 0.79*** | 1.29*** | 0.85  | 0.61*** | 1.28*** | 0.7   | 1.34 | 1.36 | 1.34 |
| From own production  | Kg. per household /per week **** | 1.95*** | 3.27*** | 2.77  | 1.97*** | 3.38*** | 2.84  | 1.62 | 1.83 | 1.77 |
| From other source (including gift) | Kg. per household /per week **** | 0.61*** | 2.26*** | 1.23  | 0.60*** | 2.23*** | 1.26  | 0.66*** | 2.50*** | 1.03 |
| From purchased       | % of total fish consumed | 0.97*** | 0.86*** | 0.96  | 0.97*** | 0.85*** | 0.95  | 0.98*** | 0.92*** | 0.98 |
| From own production  | % of total fish consumed | 0.00*  | 0.05*  | 0.01  | 0.01*  | 0.06*  | 0.01  | 0.00* | 0.03*  | 0.0 |
| From other source (including gift) | % of total fish consumed | 0.07*** | 0.09*** | 0.03  | 0.03*** | 0.09*** | 0.04  | 0.02*** | 0.06*** | 0.02 |

### Tanzania

| Fish consumption     | Indicator | National | Rural | Urban |
|----------------------|----------|----------|-------|-------|
|                      |          | >5 Km.   | <=5 Km. | Total |
| Fish consumption     |          |          |        |       |
| Total fish           | % of total household | 0.68*** | 0.82*** | 0.71  | 0.66*** | 0.82*** | 0.68  | 0.75*** | 0.83*** | 0.78 |
| Fresh fish           | % of total household who consumed fish | 0.67*** | 0.87*** | 0.71  | 0.64*** | 0.87*** | 0.68  | 0.72*** | 0.87*** | 0.77 |
| Dried fish           | % of total household who consumed fish | 0.49*** | 0.36*** | 0.46  | 0.52*** | 0.40*** | 0.5   | 0.43*** | 0.32*** | 0.4  |
| Other fish           | % of total household who consumed fish | 0.00*  | 0.00*  | 0    | 0.00*  | 0.00*  | 0     | 0.00*  | 0.00*  | 0   |
| Total fish           | Kg. per household /per week | 0.72*** | 1.82*** | 0.98  | 0.71*** | 2.09*** | 0.96  | 0.76*** | 1.57*** | 1.03 |
| Fresh fish           | Kg. per household /per week **** | 0.71*** | 1.77*** | 1.01  | 0.68*** | 2.01*** | 0.98  | 0.78*** | 1.55*** | 1.07 |
| Dried fish           | Kg. per household /per week **** | 0.52*** | 0.76*** | 0.56  | 0.54*** | 0.83*** | 0.59  | 0.46*** | 0.67*** | 0.51 |
| Other fish           | Kg. per household /per week **** | 0.70*** | 1.60*** | 0.9   | 0.68*** | 1.87*** | 0.88  | 0.75*** | 1.35*** | 0.94 |
| Source               |          |          |        |       |
| From purchased       | Kg. per household /per week **** | 0.70*** | 1.60*** | 0.9   | 0.68*** | 1.87*** | 0.88  | 0.75*** | 1.35*** | 0.94 |
| From own production  | Kg. per household /per week **** | 2.56*** | 4.16*** | 3.5   | 2.79  | 3.39  | 3.09  | 0.50*** | 5.51*** | 4.7 |
| From other source (including gift) | Kg. per household /per week **** | 1.11*** | 2.56*** | 1.86  | 1.10*** | 2.54*** | 1.76  | 1.15*  | 2.59*  | 2.08 |
| From purchased       | % of total fish consumed | 0.97*** | 0.89*** | 0.95  | 0.97*** | 0.86*** | 0.95  | 0.98*** | 0.92*** | 0.96 |
| From own production  | % of total fish consumed | 0.01*** | 0.03*** | 0.01  | 0.01*** | 0.04*** | 0.01  | 0.00*** | 0.07*** | 0.01 |
| From other source (including gift) | % of total fish consumed | 0.07*** | 0.08*** | 0.04  | 0.03*** | 0.10*** | 0.04  | 0.02*** | 0.06*** | 0.03 |

### Uganda

| Fish consumption     | Indicator | National | Rural | Urban |
|----------------------|----------|----------|-------|-------|
|                      |          | >5 Km.   | <=5 Km. | Total |
| Fish consumption     |          |          |        |       |
| Total fish           | % of total household | 0.31*** | 0.46*** | 0.33  | 0.29*** | 0.47*** | 0.31  | 0.39 | 0.43 | 0.4  |
| Fresh fish           | % of total household who consumed fish | 0.44*** | 0.76*** | 0.51  | 0.39*** | 0.83*** | 0.49  | 0.56 | 0.53 | 0.55 |
| Dried fish           | % of total household who consumed fish | 0.70*** | 0.42*** | 0.64  | 0.71*** | 0.39*** | 0.64  | 0.66* | 0.52*  | 0.64 |
| Other fish           | % of total household who consumed fish | N.A.   | N.A.   | N.A.  | N.A.   | N.A.   | N.A.  | N.A.  | N.A.   | N.A. |
| Total fish           | Kg. per household /per week | 1.47   | 1.49   | 1.47  | 1.44  | 1.53  | 1.46  | 1.52  | 1.36  | 1.5 |
| Fresh fish           | Kg. per household /per week **** | 0.83** | 1.01** | 0.88  | 0.83** | 1.02** | 0.9   | 0.83  | 0.96  | 0.85 |
| Dried fish           | Kg. per household /per week **** | 1.58   | 1.71   | 1.6   | 1.57  | 1.73  | 1.59  | 1.61  | 1.64  | 1.61 |
| Source | Kg. per household /per week **** | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |
|--------|----------------------------------|------|------|------|------|------|------|------|------|
| From purchased |                                | 1.46 | 1.37 | 1.45 | 1.42 | 1.38 | 1.41 | 1.55 | 1.37 | 1.52 |
| From own production |                             | 1.24 | 1.77 | 1.59 | 1.08 | 1.77 | 1.54 | 3.54 | 3.54 |
| From other source (including gift) |                            | 1.43 | 1.61 | 1.49 | 1.65 | 1.65 | 1.65 | 0.88 | 0.71 | 0.87 |
| From purchased | % of total fish consumed | 0.94*** | 0.84*** | 0.92 | 0.93*** | 0.79*** | 0.9 | 0.95 | 0.99 | 0.96 |
| From own production | % of total fish consumed | 0.01 *** | 0.09*** | 0.03 | 0.02*** | 0.11*** | 0.04 | 0 | 0 | 0 |
| From other source (including gift) | % of total fish consumed | 0.05* | 0.08* | 0.05 | 0.05** | 0.10** | 0.06 | 0.05 | 0.01 | 0.04 |

| Form | % of total household | % of total household who consumed fish | % of total household who consumed fish | % of total household who consumed fish | % of total household who consumed fish | Kg. per household /per week **** | Kg. per household /per week **** | Kg. per household /per week **** | Kg. per household /per week **** |
|------|----------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Total fish |                            | 0.59*** | 0.75*** | 0.61 | 0.56*** | 0.73*** | 0.58 | 0.68*** | 0.77*** | 0.7 |
| Fresh fish | % of total househol | 0.52*** | 0.83*** | 0.58 | 0.47*** | 0.83*** | 0.53 | 0.63*** | 0.84*** | 0.68 |
| Dried fish | % of total household | 0.59*** | 0.39*** | 0.55 | 0.61*** | 0.42*** | 0.57 | 0.54*** | 0.35*** | 0.49 |
| Other fish | % of total household | 0.08*** | 0.03*** | 0.07 | 0.07*** | 0.04*** | 0.07 | 0.08*** | 0.02*** | 0.07 |
| Total fish | Kg. per household /per week | 0.86*** | 1.74*** | 1.04 | 0.79*** | 1.88*** | 0.98 | 1.00*** | 1.54*** | 1.15 |
| Fresh fish | Kg. per household /per week | 0.80*** | 1.64*** | 1.04 | 0.74*** | 1.74*** | 1.01 | 0.90*** | 1.50*** | 1.1 |
| Dried fish | Kg. per household /per week | 0.69*** | 0.90*** | 0.72 | 0.68*** | 0.97*** | 0.72 | 0.73 | 0.79 | 0.74 |
| Other fish | Kg. per household /per week | 0.48*** | 0.61*** | 0.49 | 0.46*** | 0.58*** | 0.48 | 0.51** | 0.71** | 0.52 |

| Source | Kg. per household /per week **** | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |
|--------|----------------------------------|------|------|------|------|------|------|------|------|
| From purchased |                                | 0.83*** | 1.52*** | 0.97 | 0.76*** | 1.65*** | 0.91 | 1.00*** | 1.35*** | 1.09 |
| From own production |                             | 2.09*** | 3.24*** | 2.8 | 2.17** | 2.76** | 2.51 | 1.30*** | 5.24*** | 4.39 |
| From other source (including gift) |                            | 1.07*** | 2.37*** | 1.65 | 1.10*** | 2.30*** | 1.61 | 0.97*** | 2.55*** | 1.76 |
| From purchased | % of total fish consumed | 0.97*** | 0.88*** | 0.95 | 0.96*** | 0.85*** | 0.94 | 0.98*** | 0.93*** | 0.96 |
| From own production | % of total fish consumed | 0.01 *** | 0.04*** | 0.01 | 0.01*** | 0.06*** | 0.02 | 0.00*** | 0.02*** | 0.01 |
| From other source (including gift) | % of total fish consumed | 0.03 *** | 0.08*** | 0.04 | 0.03*** | 0.10*** | 0.04 | 0.02*** | 0.05*** | 0.03 |

* significant at 10%; ** significant at 5%; *** significant at 1%

Kg. per household per week : average based on households who reported to consume fish

**** averaged among households who reported to consume a given form or source of fish. 0 are not included in the calculation

value is missing if insufficient observations for statistically significant average
| Fish consumption by: | Fish consumption | National | <=5Km | >5Km |
|----------------------|------------------|----------|-------|------|
|                      | Indicator        | Non-poor | Poor  | Total | Non-poor | Poor  | Total | Non-poor | Poor  | Total |
| Total fish           | % of total household | 0.82*** | 0.63*** | 0.73  | 0.93*** | 0.85*** | 0.89  | 0.81*** | 0.60*** | 0.72  |
| Fresh fish           | % of total household who consumed fish | 0.32*** | 0.22*** | 0.28  | 0.75*   | 0.70*   | 0.73  | 0.27*** | 0.13*** | 0.22  |
| Dried fish           | % of total household who consumed fish | 0.71   | 0.71   | 0.71  | 0.52**  | 0.45**  | 0.49  | 0.73**  | 0.76**  | 0.74  |
| Other fish           | % of total household who consumed fish | 0.32*** | 0.22*** | 0.28  | 0.22**  | 0.17**  | 0.2   | 0.34*** | 0.23*** | 0.3   |
| Total fish           | Kg. per household /per week | 1.08*** | 0.62*** | 0.9   | 1.83*** | 1.31*** | 1.59  | 0.98*** | 0.50*** | 0.8   |
| Fresh fish           | Kg. per household /per week **** | 1.54*** | 1.11*** | 1.42  | 1.70*** | 1.29*** | 1.53  | 1.48*** | 0.94*** | 1.36  |
| Dried fish           | Kg. per household /per week **** | 0.58*** | 0.41*** | 0.51  | 0.77    | 0.66    | 0.73  | 0.56*** | 0.38*** | 0.49  |
| Other fish           | Kg. per household /per week **** | 0.53*** | 0.40*** | 0.49  | 0.63    | 0.55    | 0.66  | 0.52*** | 0.38*** | 0.48  |
| Source               | From purchased   | Kg. per household /per week **** | 1.03*** | 0.57*** | 0.85  | 1.44*** | 1.10*** | 1.29  | 0.98*** | 0.48*** | 0.79  |
|                      | From own production | Kg. per household /per week **** | 3.18**  | 2.26**  | 2.77  | 3.82**  | 2.47**  | 3.27  | 1.91   | 1.99   | 1.95  |
|                      | From other source (including gift) | Kg. per household /per week **** | 1.40*** | 0.98**  | 1.23  | 2.82*** | 1.58*** | 2.26  | 0.64   | 0.56   | 0.61  |
|                      | From purchased   | % of total fish consumed | 0.96   | 0.95   | 0.96  | 0.86    | 0.86    | 0.86  | 0.97   | 0.97   | 0.97  |
|                      | From own production | % of total fish consumed | 0.01   | 0.01   | 0.01  | 0.06    | 0.05    | 0.05  | 0.00** | 0.01** | 0.0   |
|                      | From other source (including gift) | % of total fish consumed | 0.03   | 0.03   | 0.03  | 0.08    | 0.09    | 0.09  | 0.02   | 0.02   | 0.02  |

**Supplementary Table 4b Fish consumption - form (dried/fresh) and source (purchased/own production/other) - by proximity to water bodies and poor/non-poor HHs (above and below national poverty lines)**

| Form          | National | <=5Km | >5Km |
|---------------|----------|-------|------|
| Fresh fish    | % of total household who consumed fish | 0.73* | 0.69* | 0.71  |
| Dried fish    | % of total household who consumed fish | 0.47   | 0.45   | 0.46  |
| Other fish    | % of total household who consumed fish | 0.0   | 0     | 0     |
| Total fish    | Kg. per household /per week | 1.06*** | 0.88*** | 0.98  |
| Fresh fish    | Kg. per household /per week **** | 1.09*** | 0.91*** | 1.02  |
| Dried fish    | Kg. per household /per week **** | 0.57   | 0.55   | 0.56  |
| Other fish    | Kg. per household /per week **** | 1.5   | 0.81   |
| From purchased| Kg. per household /per week **** | 0.97*** | 0.79*** | 0.9   |
| From own production | Kg. per household /per week **** | 3.73   | 3.21   | 3.5   |
| Source        | From other source (including gift) | Kg. per household /per week **** | 2.30**  | 1.52**  | 1.86  |
| From purchased| % of total fish consumed | 0.96*** | 0.94*** | 0.95  |
| From own production | % of total fish consumed | 0.01   | 0.01   | 0.01  |
| From other source (including gift) | % of total fish consumed | 0.03*** | 0.05*** | 0.04  |

**Tanzania**

| Form          | National | <=5Km | >5Km |
|---------------|----------|-------|------|
| Fresh fish    | % of total household who consumed fish | 0.52*** | 0.40*** | 0.51  |
| Dried fish    | % of total household who consumed fish | 0.64   | 0.67   | 0.64  |
| Other fish    | % of total household who consumed fish | 0.0   | 0     | 0     |
| Total fish    | Kg. per household /per week | 1.57*** | 0.93*** | 1.47  |
| Fresh fish    | Kg. per household /per week **** | 0.93*** | 0.55*** | 0.89  |

**Uganda**

| Form          | National | <=5Km | >5Km |
|---------------|----------|-------|------|
| Fresh fish    | % of total household who consumed fish | 0.74*** | 0.62*** | 0.68  |
| Dried fish    | % of total household who consumed fish | 0.56**  | 0.42**  | 0.7   |
| Other fish    | % of total household who consumed fish | 1.09**  | 0.69**  | 1.01  |
| Total fish    | Kg. per household /per week | 1.5**   | 0.98**  | 1.47  |
| Fresh fish    | Kg. per household /per week **** | 0.87*** | 0.41*** | 0.83  |

*Significance levels: *p < 0.1, **p < 0.05, ***p < 0.01, ****p < 0.001.
| Source                              | Kg. per household /per week **** | 1.69*** | 1.06*** | 1.6 | 1.83** | 0.68** | 1.71 | 1.67*** | 1.10*** | 1.58 |
|------------------------------------|----------------------------------|---------|---------|-----|--------|--------|------|---------|---------|------|
| From purchased                     | Kg. per household /per week **** | 1.54*** | 0.92*** | 1.45 | 1.52** | 0.77** | 1.38 | 1.54*** | 0.97*** | 1.47 |
| From own production                | Kg. per household /per week **** | 1.71*   | 0.45    | 1.59 | 1.83** | 0.22   | 1.77 | 1.43    | 0.54    | 1.24 |
| From other source (including gift) | Kg. per household /per week **** | 1.54*** | 0.93*** | 0.92 | 0.81** | 0.97** | 0.84 | 0.94    | 0.92    | 0.94 |
| From purchased % of total fish consumed | 0.92 | 0.93 | 0.92 | 0.81** | 0.97** | 0.84 | 0.94    | 0.92    | 0.94 |
| From own production % of total fish consumed | 0.03 | 0.02 | 0.03 | 0.10** | 0.00** | 0.09 | 0.01    | 0.02    | 0.01 |
| From other source (including gift) % of total fish consumed | 0.05 | 0.06 | 0.05 | 0.09** | 0.00** | 0.08 | 0.05    | 0.06    | 0.05 |

### All countries

| Form                  | Kg. per household /per week **** | 1.69*** | 1.06*** | 1.6 | 1.83** | 0.68** | 1.71 | 1.67*** | 1.10*** | 1.58 |
|-----------------------|----------------------------------|---------|---------|-----|--------|--------|------|---------|---------|------|
| Fresh fish            | % of total household who consumed fish | 0.59*** | 0.56*** | 0.58 | 0.83  | 0.83  | 0.83 | 0.53*** | 0.49*** | 0.52 |
| Dried fish            | % of total household who consumed fish | 0.56*** | 0.53*** | 0.55 | 0.39  | 0.38  | 0.39 | 0.60*** | 0.56*** | 0.59 |
| Other fish            | % of total household who consumed fish | 0.07*** | 0.06*** | 0.07 | 0.03  | 0.04  | 0.03 | 0.09*** | 0.06*** | 0.08 |
| Total fish            | Kg. per household /per week **** | 1.16*** | 0.82*** | 1.04 | 1.75  | 1.71  | 1.74 | 1.00*** | 0.60*** | 0.86 |
| Fresh fish            | Kg. per household /per week **** | 1.12*** | 0.91*** | 1.05 | 1.61  | 1.69  | 1.64 | 0.91*** | 0.59*** | 0.8 |
| Dried fish            | Kg. per household /per week **** | 0.82*** | 0.54*** | 0.72 | 0.98*** | 0.74*** | 0.9 | 0.80*** | 0.51*** | 0.69 |
| Other fish            | Kg. per household /per week **** | 0.53*** | 0.40*** | 0.49 | 0.63  | 0.58  | 0.61 | 0.52*** | 0.38*** | 0.48 |
| From purchased        | Kg. per household /per week **** | 1.09*** | 0.74*** | 0.97 | 1.53  | 1.5   | 1.52 | 0.98*** | 0.57*** | 0.83 |
| From other source (including gift) | 2.82 | 2.74 | 2.8 | 3.24  | 3.24  | 3.24 | 2.14    | 2.01    | 2.09 |

### Form

| Source                              | Kg. per household /per week **** | 1.69*** | 1.06*** | 1.6 | 1.83** | 0.68** | 1.71 | 1.67*** | 1.10*** | 1.58 |
|------------------------------------|----------------------------------|---------|---------|-----|--------|--------|------|---------|---------|------|
| From purchased                     | Kg. per household /per week **** | 1.86*** | 1.39*** | 1.65 | 2.83*** | 1.88*** | 2.37 | 1.16*   | 0.94*   | 1.07 |
| From purchased % of total fish consumed | 0.95*** | 0.94*** | 0.95 | 0.89*** | 0.85*** | 0.88 | 0.97    | 0.96    | 0.97 |
| From own production                | Kg. per household /per week **** | 0.01    | 0.01    | 0.01 | 0.04  | 0.04  | 0.04 | 0.01    | 0.01    | 0.01 |
| From other source (including gift) % of total fish consumed | 0.03*** | 0.05*** | 0.04 | 0.06*** | 0.11*** | 0.08 | 0.02    | 0.03    | 0.03 |

* significant at 10%; ** significant at 5%; *** significant at 1%
Kg. per household per week: average based on households who reported to consume fish
**** averaged among households who reported to consume a given form or source of fish. 0 are not included in the calculation
value is missing if insufficient observations for statistically significant average
## Supplementary Table 5 Fish consumption - quantity - by quintile and proximity to water bodies

| Fish consumption Indicator | Quintile | National | Rural | Urban |
|----------------------------|----------|----------|-------|-------|
|                            |          | >5 Km    | <=5Km | Total |
| Total fish Kg. per household /per week | First | 0.42*** | 1.18*** | 0.54*** | 0.56*** | 1.26 | 0.69*** |
|                            | Second  | 0.50*** | 1.39**  | 0.63*** | 0.47*** | 1.42* | 0.60*** | 0.84*** | 1.15 | 0.91*** |
| Total fish Kg. per household /per week | Third  | 0.69*** | 1.57 | 0.82*** | 0.67*  | 1.61 | 0.81 | 0.80*** | 1.31 | 0.87*** |
| Total fish Kg. per household /per week | Fourth | 0.86** | 1.99*** | 1.01*** | 0.73*** | 2.05*** | 0.92*** | 1.22*  | 1.68 | 1.26  |
| Total fish Kg. per household /per week | Fifth   | 1.27*** | 1.82*  | 1.31*** | 0.88*** | 1.87* | 1.00*** | 1.61*** | 1.7 | 1.61*** |
| Total fish Kg. per household /per week | Total   | 0.8 | 1.59 | 0.9 | 0.62 | 1.62 | 0.77 | 1.34 | 1.47 | 1.35 |
| Total fish Kg. per household /per week | First | 0.53*** | 1.37*** | 0.69*** | 0.53*** | 1.44*** | 0.68*** | 0.49 | 1.1 | 0.82 |
| Total fish Kg. per household /per week | Second | 0.65** | 2.11 | 0.95 | 0.67 | 2.11 | 0.94 | 0.49*** | 2.11* | 1.01 |
| Total fish Kg. per household /per week | Third | 0.77 | 2.34*** | 1.12*** | 0.80* | 2.54** | 1.13*** | 0.68 | 2.01** | 1.1 |
| Total fish Kg. per household /per week | Fourth | 0.83*** | 1.89 | 1.08** | 0.86** | 2.49* | 1.15*** | 0.79 | 1.54 | 1.01 |
| Total fish Kg. per household /per week | Fifth | 0.84*** | 1.43*** | 1.01 | 0.84 | 1.49 | 0.94 | 0.84** | 1.42* | 1.04 |
| Total fish Kg. per household /per week | Total | 0.73 | 1.82 | 0.98 | 0.71 | 2.09 | 0.96 | 0.76 | 1.57 | 1.03 |
| Total fish Kg. per household /per week | First | 0.99*** | 0.78** | 0.94*** | 0.95*** | 0.78** | 0.90*** | 1.26 | 0.85 | 1.2 |
| Total fish Kg. per household /per week | Second | 1.21** | 1.08 | 1.19*** | 1.24* | 1.09 | 1.21** | 0.94* | 0.8 | 0.93* |
| Total fish Kg. per household /per week | Third | 1.5 | 1.16 | 1.42 | 1.53 | 1.23 | 1.45 | 1.4 | 0.86 | 1.29 |
| Total fish Kg. per household /per week | Fourth | 1.51 | 2.42*** | 1.66** | 1.56 | 2.86*** | 1.80*** | 1.42 | 0.93 | 1.37 |
| Total fish Kg. per household /per week | Fifth | 1.87*** | 1.84 | 1.86*** | 2.14*** | 1.95 | 2.10*** | 1.72** | 1.75** | 1.73*** |
| Total fish Kg. per household /per week | Total | 1.47 | 1.49 | 1.47 | 1.45 | 1.53 | 1.46 | 1.52 | 1.36 | 1.5 |
| Total fish Kg. per household /per week | First | 0.56*** | 1.24*** | 0.69*** | 0.55*** | 1.27*** | 0.67*** | 0.73** | 1.09* | 0.88** |
| Total fish Kg. per household /per week | Second | 0.69*** | 1.84 | 0.91*** | 0.70*** | 1.82 | 0.90*** | 0.62*** | 1.92* | 0.98*** |
| Total fish Kg. per household /per week | Third | 0.85 | 2.01*** | 1.09** | 0.87*** | 2.07** | 1.10*** | 0.80*** | 1.85** | 1.09 |
| Total fish Kg. per household /per week | Fourth | 0.95*** | 1.98*** | 1.16*** | 0.95*** | 2.45*** | 1.20*** | 0.95 | 1.51 | 1.09 |
| Total fish Kg. per household /per week | Fifth | 1.13*** | 1.52*** | 1.22*** | 1.07*** | 1.73 | 1.17*** | 1.17*** | 1.46 | 1.25*** |
| Total fish Kg. per household /per week | Total | 0.86 | 1.74 | 1.04 | 0.79 | 1.88 | 0.98 | 1 | 1.54 | 1.15 |
## Supplementary Table 6 Fishing HHs vs non-fishing HHs - fish consumption, dietary diversity and multiple poverty indicators for Malawi

| Indicator | Measure | All Households | Fishing Households | Non-fishing Households | Malawi: National |
|-----------|---------|----------------|-------------------|------------------------|-----------------|
|           |         | >5 Km. <=5 Km Total | >5 Km. <=5 Km Total | >5 Km. <=5 Km Total | Malawi: National |
| Fish consumption | Kg. per household /per week | 0.80*** 1.59*** 0.9 | 1.40*** 3.36*** 2.37 | 0.79*** 1.38*** 0.86 | 0.91*** 0.05 0.28 |
| Fish consumption from own-production | % of total fish consumed | 0.00*** 0.05*** 0.01 | 0.17*** 0.41*** 0.29 | 0.00*** 0.01*** 0 | 0.00*** 0.01*** 0 |
| Poor household | % of total households | 0.44 0.46 0.45 | 0.37 0.42 0.39 | 0.45 0.47 0.45 | 0.44 0.46 0.45 |
| Wealth index | Score (PCA) | 1.46 1.51 1.47 | 1.67 1.46 1.58 | 1.46 1.51 1.46 | 1.46 1.51 1.46 |
| Food insecurity | Total months hh experienced food insecurity | 3.11* 3.28* 3.13 | 3.02 2.63 2.84 | 3.11* 3.35* 3.14 | 3.53 3.37 3.51 |
| Household with an acceptable FC profile | % of total household | 0.62*** 0.73*** 0.63 | 0.68** 0.79*** 0.73 | 0.62*** 0.73*** 0.63 | 0.55*** 0.71*** 0.56 |
| Education of the head of the household | % with no education | 0.69*** 0.73*** 0.7 | 0.65** 0.77** 0.71 | 0.69*** 0.73*** 0.7 | 0.69*** 0.73*** 0.7 |
| Education of the head of the household | % with primary education | 0.19 0.19 0.19 | 0.25 0.2 0.23 | 0.19 0.19 0.19 | 0.19 0.19 0.19 |
| Education of the head of the household | % with secondary education | 0.10*** 0.07*** 0.09 | 0.08** 0.03*** 0.06 | 0.10*** 0.07*** 0.1 | 0.10*** 0.07*** 0.1 |
| Education of the head of the household | % with tertiary education | 0.02** 0.01** 0.02 | 0.01* 0.00** 0.01 | 0.02* 0.01* 0.02 | 0.02* 0.01* 0.02 |
| Distance to nearest agricultural markets | Km. | 21.76*** 27.42*** 22.4 | 22.11*** 33.99*** 27.5 | 21.75*** 26.70*** 22.2 | 21.75*** 26.70*** 22.2 |
| Distance to nearest water bodies | Km. | 44.63*** 2.04*** 40.1 | 36.25*** 1.89*** 20.6 | 44.75*** 2.05*** 40.5 | 44.75*** 2.05*** 40.5 |
| Households with owned or cultivated land | % | 0.79 0.78 0.79 | 0.79*** 0.56*** 0.69 | 0.79 0.8 0.79 | 0.79 0.8 0.79 |

### Malawi: Rural

| Fish consumption | Kg. per household /per week | 0.62*** 1.62*** 0.77 | 1.15*** 3.33*** 2.33 | 0.61*** 1.39*** 0.72 | 0.91*** 0.80*** 0.91 |
| Fish consumption from own-production | % of total fish consumed | 0.01*** 0.06*** 0.01 | 0.21*** 0.42*** 0.33 | 0.00*** 0.01*** 0 | 0.00*** 0.01*** 0 |
| Poor household | % of total households | 0.52** 0.49** 0.52 | 0.47 0.43 0.45 | 0.52 0.5 0.52 | 0.52 0.5 0.52 |
| Wealth index | Score (PCA) | 1.17*** 1.33*** 1.19 | 1.36 1.3 1.33 | 1.16*** 1.34*** 1.18 | 1.16*** 1.34*** 1.18 |
| Food insecurity | Total months hh experienced food insecurity | 3.53*** 3.29*** 3.5 | 3.64*** 2.57*** 3.1 | 3.53 3.37 3.51 | 3.53 3.37 3.51 |
| Household with an acceptable FC profile | % of total household | 0.55*** 0.72*** 0.57 | 0.59*** 0.79*** 0.69 | 0.55*** 0.71*** 0.56 | 0.55*** 0.71*** 0.56 |
| Education of the head of the household | % with no education | 0.77 0.76 0.77 | 0.75 0.76 0.76 | 0.77 0.76 0.77 | 0.77 0.76 0.77 |
| Education of the head of the household | % with primary education | 0.17 0.18 0.17 | 0.24 0.21 0.22 | 0.17 0.18 0.17 | 0.17 0.18 0.17 |
| Education of the head of the household | % with secondary education | 0.05 0.05 0.05 | 0.01 0.03 0.02 | 0.05 0.06 0.05 | 0.05 0.06 0.05 |
| Education of the head of the household | % with tertiary education | 0 0 0 | 0 0 0 | 0 0 0 | 0 0 0 |
| Distance to nearest agricultural markets | Km. | 25.16*** 30.83*** 25.8 | 26.71*** 35.67*** 31.2 | 25.13*** 30.26*** 25.7 | 25.13*** 30.26*** 25.7 |
| Distance to nearest water bodies | Km. | 42.84*** 1.89*** 38.2 | 29.23*** 1.88*** 15.6 | 43.03*** 1.89*** 38.7 | 43.03*** 1.89*** 38.7 |
| Households with owned or cultivated land | % | 0.91*** 0.80*** 0.9 | 0.91*** 0.55*** 0.73 | 0.91*** 0.82*** 0.9 | 0.91*** 0.82*** 0.9 |

### Malawi: Urban

| Fish consumption | Kg. per household /per week | 1.34 1.47 1.35 | 2.15*** 3.66*** 2.57 | 1.33 1.3 1.33 | 1.33 1.3 1.33 |
| Fish consumption from own-production | % of total fish consumed | 0.00*** 0.03*** 0 | 0.04*** 0.31*** 0.11 | 0 0 0 | 0 0 0 |
| Poor household | % of total households | 0.13*** 0.31*** 0.14 | 0.03*** 0.35*** 0.11 | 0.13*** 0.31*** 0.14 | 0.13*** 0.31*** 0.14 |
| Wealth index | Score (PCA) | 2.66 2.62 2.66 | 2.71 3.03 2.79 | 2.66 2.59 2.65 | 2.66 2.59 2.65 |
| Food insecurity | Total months hh experienced food insecurity | 1.43*** 3.25*** 1.57 | 0.97*** 3.24*** 1.54 | 1.43*** 3.25*** 1.57 | 1.43*** 3.25*** 1.57 |
| Household with an acceptable FC profile | % of total household | 0.91*** 0.81*** 0.91 | 1.00*** 0.77*** 0.94 | 0.91*** 0.82*** 0.9 | 0.91*** 0.82*** 0.9 |
| Education of the head of the household | % with no education | 0.37*** 0.58*** 0.38 | 0.32*** 0.87*** 0.46 | 0.37*** 0.56*** 0.38 | 0.37*** 0.56*** 0.38 |
| Education of the head of the household | % with primary education | 0.28* 0.22* 0.28 | 0.29 0.12 0.25 | 0.28 0.23 0.28 | 0.28 0.23 0.28 |
| Education of the head of the household | % with secondary education | 0.28*** 0.17*** 0.27 | 0.33* 0.01** 0.25 | 0.28*** 0.18*** 0.27 | 0.28*** 0.18*** 0.27 |
|                          | % with tertiary education | 0.07* | 0.03* | 0.07 | 0.06 | 0 | 0.05 | 0.07* | 0.03* | 0.07 |
|--------------------------|--------------------------|-------|-------|------|------|---|------|------|-------|------|
| Education of the head of |                          |       |       |      |      |   |      |      |       |      |
| the household            |                          |       |       |      |      |   |      |      |       |      |
| Distance to nearest      | Km.                      | 7.92***| 5.86***| 7.76 | 6.82***| 17.50***| 9.51 | 7.93***| 5.02***| 7.72 |
| agricultural markets     |                          |       |       |      |      |   |      |      |       |      |
| Distance to nearest      | Km.                      | 51.88***| 2.96***| 48.1 | 59.61***| 2.06***| 45.1 | 51.75***| 3.03***| 48.2 |
| water bodies             |                          |       |       |      |      |   |      |      |       |      |
| Households with owned or | %                        | 0.30***| 0.65***| 0.32 | 0.40**| 0.71**| 0.48 | 0.29***| 0.65***| 0.32 |
| cultivated land          |                          |       |       |      |      |   |      |      |       |      |

* significant at 10%; ** significant at 5%; *** significant at 1%

Kg. per household per week: average based on households who reported to consume fish
value is missing if insufficient observations for statistically significant average
## Supplementary Table 6 Fishing HHs vs non-fishing HHs - fish consumption, dietary diversity and multiple poverty indicators for Tanzania

| Indicator | Measure | All Households | Fishing Households | Non-fishing Households |
|-----------|---------|----------------|--------------------|-----------------------|
|           |         | Tanzania: National | Tanzania: Rural | Tanzania: Urban |
| Fish consumption | Kg. per household /per week | 0.73*** 1.82*** 0.98 | 1.36*** 2.99*** 2.24 | 0.71*** 1.65*** 0.91 |
| Fish consumption from own-production | % of total fish consumed | 0.01*** 0.03*** 0.01 | 0.17 0.18 0.18 | 0.00*** 0.01*** 0 |
| Poor household | % of total households | 0.46*** 0.37*** 0.44 | 0.4 0.4 0.4 | 0.46*** 0.37*** 0.45 |
| Wealth index | Score (PCA) | 54.2 57.78 54.9 | 70.3 60.02 65 | 53.78 57.51 54.5 |
| Food insecurity | Total months hh experienced food insecurity | 1.46 1.37 1.44 | 1.13 1.45 1.3 | 1.47 1.36 1.45 |
| Household with an acceptable FC profile | % of total household | 0.87*** 0.94*** 0.89 | 0.95 0.99 0.97 | 0.87*** 0.93*** 0.88 |
| Education of the head of the household | % with no education | 0.24** 0.20** 0.23 | 0.18 0.15 0.16 | 0.24* 0.21* 0.24 |
| Education of the head of the household | % with primary education | 0.61** 0.56** 0.6 | 0.71 0.77 0.74 | 0.60*** 0.53*** 0.59 |
| Education of the head of the household | % with secondary education | 0.14*** 0.21*** 0.16 | 0.11 0.08 0.1 | 0.14*** 0.23*** 0.16 |
| Education of the head of the household | % with tertiary education | 0.01*** 0.02*** 0.01 | 0 0 0 | 0.01*** 0.03*** 0.01 |
| Distance to nearest agricultural markets | Km. | N.A. N.A. N.A. | N.A. N.A. N.A. | N.A. N.A. N.A. |
| Distance to nearest water bodies | Km. | 41.85*** 2.19*** 33.8 | 34.99*** 1.36*** 17.5 | 42.02*** 2.29*** 34.5 |
| Households with owned or cultivated land | % | 0.75*** 0.52*** 0.7 | 0.81** 0.61** 0.71 | 0.75*** 0.50*** 0.7 |

## Supplementary Table 7 Repeat measures ANOVA: Impact of distance to nearest water bodies on fish consumption and dietary diversity 

| Distance to nearest water bodies | Fish consumption | Poor household | Wealth index | Food insecurity | Household with an acceptable FC profile | Education of the head of the household |
|---------------------------------|------------------|----------------|--------------|----------------|----------------------------------------|--------------------------------------|
| Km.                             | Kg. per household /per week | 0.73*** 1.82*** 0.98 | 0.46*** 0.37*** 0.44 | 54.2 57.78 54.9 | 1.46 1.37 1.44 | 0.87*** 0.94*** 0.89 |
| Km.                             | % of total fish consumed | 0.01*** 0.03*** 0.01 | 0.46*** 0.37*** 0.44 | 54.2 57.78 54.9 | 1.46 1.37 1.44 | 0.87*** 0.94*** 0.89 |
| Km.                             | % of total households | 0.46*** 0.37*** 0.44 | 0.46*** 0.37*** 0.44 | 54.2 57.78 54.9 | 1.46 1.37 1.44 | 0.87*** 0.94*** 0.89 |
| Km.                             | Score (PCA) | 54.2 57.78 54.9 | 54.2 57.78 54.9 | 54.2 57.78 54.9 | 1.46 1.37 1.44 | 0.87*** 0.94*** 0.89 |
| Km.                             | Total months hh experienced food insecurity | 1.46 1.37 1.44 | 1.46 1.37 1.44 | 1.46 1.37 1.44 | 1.46 1.37 1.44 | 0.87*** 0.94*** 0.89 |
| Km.                             | % with no education | 0.24** 0.20** 0.23 | 0.24** 0.20** 0.23 | 0.24** 0.20** 0.23 | 0.24** 0.20** 0.23 | 0.24** 0.20** 0.23 |
| Km.                             | % with primary education | 0.61** 0.56** 0.6 | 0.61** 0.56** 0.6 | 0.61** 0.56** 0.6 | 0.61** 0.56** 0.6 | 0.61** 0.56** 0.6 |
| Km.                             | % with secondary education | 0.14*** 0.21*** 0.16 | 0.14*** 0.21*** 0.16 | 0.14*** 0.21*** 0.16 | 0.14*** 0.21*** 0.16 | 0.14*** 0.21*** 0.16 |
| Km.                             | % with tertiary education | 0.01*** 0.02*** 0.01 | 0.01*** 0.02*** 0.01 | 0.01*** 0.02*** 0.01 | 0.01*** 0.02*** 0.01 | 0.01*** 0.02*** 0.01 |
|                                           | % with tertiary education | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |
|------------------------------------------|---------------------------|------|------|------|------|------|------|------|------|------|------|------|
| Education of the head of the household   | 0.02**                    | 0.04** | 0.03 | 0.02*** | 0.05*** | 0.03 |
| Distance to nearest agricultural markets | Km.                       | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. | N.A. |
| Distance to nearest water bodies         | Km.                       | 35.67*** | 2.32*** | 25.4 | 35.70*** | 1.43*** | 9   | 35.67*** | 2.39*** | 25.9 |
| Households with owned or cultivated land | %                         | 0.35*** | 0.22*** | 0.31 | 0.39 | 0.33 | 0.34 | 0.35*** | 0.21*** | 0.31 |

* significant at 10%; ** significant at 5%; *** significant at 1%

Kg. per household per week: average based on households who reported to consume fish
value is missing if insufficient observations for statistically significant average
**Supplementary Table 6 Fishing HHs vs non-fishing HHs - fish consumption, dietary diversity and multiple poverty indicators for Uganda**

| Indicator | Measure | All Households | Fishing Households | Non-fishing Households |
|-----------|---------|----------------|-------------------|-----------------------|
|           | >5 Km. <=5 Km Total | >5 Km. <=5 Km Total | >5 Km. <=5 Km Total |
| Fish consumption | Kg. per household /per week | 1.47 1.49 1.47 | 1.74 1.49 1.58 | 1.46 1.48 1.47 |
| Fish consumption from own-production | % of total fish consumed | 0.01*** 0.09*** 0.03 | 0.26 0.36 0.32 | 0.01*** 0.03*** 0.01 |
| Poor household | % of total households | 0.2 0.22 0.21 | 0.17 0.13 0.14 | 0.2 0.23 0.21 |
| Wealth index | Score (PCA) | 1.54 1.49 1.54 | 1.62 1.92 1.81 | 1.54 1.44 1.53 |
| Food insecurity | % of total households | 0.02*** 0.11*** 0.04 | 0.28 0.25 0.28 | 0.40*** 0.02*** 0.16 |
| Poor household | % of total households | 0.17 0.18 0.17 | 0.17 0.08 0.11 | 0.17 0.19 0.17 |
| Wealth index | Score (PCA) | 0.06** 0.03** 0.06 | 0.02 0.01 0.01 | 0.06* 0.04* 0.06 |
| Distance to nearest agricultural markets | Km. | 27.07*** 33.96*** 28.1 | 33.82*** 49.94*** 44.2 | 27.00*** 31.90*** 27.7 |
| Distance to nearest water bodies | Km. | 32.62*** 2.57*** 28.2 | 21.99*** 2.00*** 9.11 | 32.74*** 2.64*** 28.7 |
| Households with owned or cultivated land | % | 0.53*** 0.41*** 0.52 | 0.49 0.5 0.5 | 0.53*** 0.40*** 0.52 |

**Uganda: National**

| Indicator | Measure | Uganda: Rural | Uganda: Urban |
|-----------|---------|--------------|--------------|
| Fish consumption | Kg. per household /per week | 1.44 1.53 1.46 | 1.92 1.54 1.67 | 1.43 1.52 1.45 |
| Fish consumption from own-production | % of total fish consumed | 0.02*** 0.11*** 0.04 | 0.32 0.39 0.37 | 0.01*** 0.04*** 0.01 |
| Poor household | % of total households | 0.24 0.25 0.24 | 0.19 0.13 0.15 | 0.24 0.27 0.24 |
| Wealth index | Score (PCA) | 1.4 1.4 1.4 | 1.51 1.95 1.8 | 1.4 1.31 1.39 |
| Food insecurity | % of total households | 0.9 0.9 0.9 | 0.95 0.83 0.87 | 0.9 0.93 0.9 |
| Poor household | % of total households | 0.28 0.24 0.27 | 0.30*** 0.02*** 0.11 | 0.28 0.28 0.28 |
| Wealth index | Score (PCA) | 0.54** 0.61** 0.55 | 0.48*** 0.90*** 0.76 | 0.54 0.56 0.54 |
| Food insecurity | % of total households | 0.14 0.13 0.14 | 0.2 0.08 0.12 | 0.14 0.13 0.14 |
| Poor household | % of total households | 0.04* 0.02* 0.03 | 0.02 0.01 0.01 | 0.04 0.02 0.04 |
| Distance to nearest agricultural markets | Km. | 30.84*** 38.80*** 32 | 33.96*** 49.11*** 44.1 | 30.80*** 37.03*** 31.6 |
| Distance to nearest water bodies | Km. | 35.82*** 2.55*** 31 | 23.96*** 1.96*** 9.28 | 35.97*** 2.65*** 31.7 |
| Households with owned or cultivated land | % | 0.65*** 0.54*** 0.63 | 0.57 0.53 0.54 | 0.65*** 0.54*** 0.63 |

**Uganda: Urban**

| Indicator | Measure | Uganda: Urban |
|-----------|---------|--------------|
| Fish consumption | Kg. per household /per week | 1.52 1.36 1.5 | 1.53 1.39 1.51 |
| Fish consumption from own-production | % of total fish consumed | 0 0 0 | 0 0 0 |
| Poor household | % of total households | 0.12 0.11 | 0.1 0.13 0.11 |
| Wealth index | Score (PCA) | 1.97 1.75 1.94 | 1.97 1.76 1.94 |
| Food insecurity | % of total households | 0.85 0.88 0.85 | 0.85 0.88 0.85 |
| Poor household | % of total households | 0.3 0.27 0.29 | 0.29 0.28 0.29 |
| Wealth index | Score (PCA) | 0.3 0.33 0.33 | 0.34 0.31 0.33 |
| Education of the head of the household | % with secondary education | 0.23* 0.31* 0.24 | 0.23* 0.32** 0.25 |
| Education of the head of the household | % with tertiary education | 0.14 | 0.08 | 0.13 | 0.14 | 0.09 | 0.13 |
|---------------------------------------|--------------------------|------|------|------|------|------|------|
| Distance to nearest agricultural markets | Km.                      | 15.59** | 20.10** | 16.3 | 15.48* | 19.03* | 16 |
| Distance to nearest water bodies      | Km.                      | 22.88*** | 2.63*** | 19.8 | 22.96*** | 2.63*** | 19.9 |
| Households with owned or cultivated land | %                       | 0.20*** | 0.04*** | 0.17 | 0.20*** | 0.04*** | 0.17 |

* significant at 10%; ** significant at 5%; *** significant at 1%

Kg. per household per week: average based on households who reported to consume fish
value is missing if insufficient observations for statistically significant average
## Supplementary Table 6 Fishing HHs vs non-fishing HHs - fish consumption, dietary diversity and multiple poverty indicators for all countries

| Indicator | Measure | All Countries: National | Fishing Households | Non-fishing Households |
|-----------|---------|-------------------------|--------------------|-----------------------|
|           |         | All Households          | Fishing Households | Non-fishing Households |
|           |         | >5 Km. <=5 Km Total     | >5 Km. <=5 Km Total | >5 Km. <=5 Km Total   |
| Fish consumption | Kg. per household /per week | 0.86*** 1.74*** 1.04 | 1.42*** 2.76*** 2.15 | 0.84*** 1.58*** 0.98 |
| Fish consumption from own-production | % of total fish consumed | 0.01*** 0.04*** 0.01 | 0.18* 0.24* 0.22 | 0.00*** 0.01*** 0 |
| Poor household | % of total households | 0.39*** 0.35*** 0.38 | 0.36 0.33 0.35 | 0.39*** 0.35*** 0.38 |
| Wealth index | Score (PCA) | 28.39*** 37.52*** 29.9 | 48.51* 38.97* 43.4 | 28.00*** 37.35*** 29.5 |
| Food insecurity | Total months hh experienced food insecurity | 1.80*** 1.63*** 1.77 | 1.43 1.59 1.52 | 1.81*** 1.64*** 1.78 |
| Household with an acceptable FC profile | % of total household | 0.82*** 0.90*** 0.84 | 0.91 0.93 0.92 | 0.82*** 0.90*** 0.83 |
| Education of the head of the household | % with no education | 0.35*** 0.28*** 0.34 | 0.29*** 0.19*** 0.24 | 0.35*** 0.29*** 0.34 |
| Education of the head of the household | % with primary education | 0.49 0.51 0.49 | 0.59*** 0.74*** 0.67 | 0.48 0.48 0.48 |
| Education of the head of the household | % with secondary education | 0.14*** 0.19*** 0.15 | 0.11 0.08 0.09 | 0.14*** 0.20*** 0.15 |
| Education of the head of the household | % with tertiary education | 0.03 0.02 0.02 | 0.01 0 0 | 0.03 0.03 0.03 |
| Distance to nearest agricultural markets | Km. | 24.75*** 31.66*** 25.7 | 27.91*** 44.82*** 37.5 | 24.71*** 30.05*** 25.3 |
| Distance to nearest water bodies | Km. | 39.89*** 2.26*** 33.6 | 33.15*** 1.58*** 16.2 | 40.02*** 2.34*** 34.2 |
| Households with owned or cultivated land | % | 0.70*** 0.52*** 0.67 | 0.75*** 0.58*** 0.66 | 0.70*** 0.52*** 0.67 |

### All countries: Rural

| Indicator | Measure | All Households | Fishing Households | Non-fishing Households |
|-----------|---------|----------------|--------------------|-----------------------|
| Fish consumption | Kg. per household /per week | 0.79*** 1.88*** 0.98 | 1.45*** 2.61*** 2.03 | 0.77*** 1.73*** 0.92 |
| Fish consumption from own-production | % of total fish consumed | 0.01*** 0.06*** 0.02 | 0.20* 0.26* 0.23 | 0.00*** 0.02*** 0 |
| Poor household | % of total households | 0.48 0.48 0.48 | 0.41 0.38 0.4 | 0.48 0.49 0.48 |
| Wealth index | Score (PCA) | 22.45*** 24.62*** 22.8 | 41.29* 32.89* 37.1 | 22.02 23.34 22.2 |
| Food insecurity | Total months hh experienced food insecurity | 2.03* 1.93* 2.02 | 1.62 1.7 1.66 | 2.04 1.96 2.03 |
| Household with an acceptable FC profile | % of total household | 0.80*** 0.88*** 0.81 | 0.9 0.91 0.9 | 0.79*** 0.88*** 0.8 |
| Education of the head of the household | % with no education | 0.40*** 0.36*** 0.39 | 0.30*** 0.18*** 0.24 | 0.4 0.38 0.4 |
| Education of the head of the household | % with primary education | 0.50*** 0.54*** 0.5 | 0.61*** 0.74*** 0.67 | 0.5 0.51 0.5 |
| Education of the head of the household | % with secondary education | 0.09 0.1 0.09 | 0.09 0.08 0.08 | 0.09 0.1 0.09 |
| Education of the head of the household | % with tertiary education | 0.01** 0.01** 0.01 | 0 0 0 | 0.01 0.01 0.01 |
| Distance to nearest agricultural markets | Km. | 28.27*** 35.72*** 29.2 | 30.50*** 44.92*** 39.2 | 28.24*** 34.34*** 29 |
| Distance to nearest water bodies | Km. | 41.63*** 2.17*** 36.1 | 32.37*** 1.61*** 17.1 | 41.83*** 2.26*** 36.9 |
| Households with owned or cultivated land | % | 0.84*** 0.74*** 0.82 | 0.82*** 0.67*** 0.75 | 0.84*** 0.75*** 0.82 |

### All countries: Urban

| Indicator | Measure | All Households | Fishing Households | Non-fishing Households |
|-----------|---------|----------------|--------------------|-----------------------|
| Fish consumption | Kg. per household /per week | 1.00*** 1.54*** 1.15 | 1.25*** 3.12*** 2.57 | 1.00*** 1.39*** 1.1 |
| Fish consumption from own-production | % of total fish consumed | 0.00*** 0.02*** 0.01 | 0.11 0.2 0.17 | 0.00* 0.00* 0 |
| Poor household | % of total households | 0.13 0.15 0.14 | 0.05* 0.21* 0.16 | 0.13 0.15 0.14 |
| Wealth index | Score (PCA) | 45.42*** 56.41*** 48.1 | 92.62 55.45 67 | 44.92*** 56.48*** 47.6 |
| Food insecurity | Total months hh experienced food insecurity | 1.14 1.21 1.15 | 0.25*** 1.31*** 0.98 | 1.15 1.2 1.16 |
| Household with an acceptable FC profile | % of total household | 0.90*** 0.93*** 0.91 | 0.95 0.99 0.98 | 0.90*** 0.93*** 0.91 |
| Education of the head of the household | % with no education | 0.21*** 0.17*** 0.2 | 0.25 0.2 0.22 | 0.21*** 0.17*** 0.2 |
| Education of the head of the household | % with primary education | 0.45 0.46 0.45 | 0.47** 0.72** 0.65 | 0.45 0.44 0.45 |
| Education of the head of the household | % with secondary education | 0.28** 0.31** 0.29 | 0.26*** 0.07*** 0.13 | 0.28*** 0.33*** 0.29 |
| Education of the head of the household | % with tertiary education | 0.06 0.05 0.06 | 0.02 0 0.01 | 0.06 0.05 0.06 |
| Distance to nearest agricultural markets | Km. | 12.66*** 16.93*** 13.2 | 16.77*** 43.45*** 25.2 | 12.62*** 16.02*** 13 |
| Distance to nearest water bodies | Km. | 34.93*** 2.39*** 27.1 | 37.89*** 1.51*** 12.8 | 34.90*** 2.46*** 27.5 |
| Households with owned or cultivated land | % | 0.30*** 0.21*** 0.28 | 0.33 0.33 0.33 | 0.30*** 0.20*** 0.28 |

* significant at 10%; ** significant at 5%; *** significant at 1%

Kg. per household per week: average based on households who reported to consume fish
value is missing if insufficient observations for statistically significant average
Supplementary Table 7 Dietary diversity (food consumption score) by proximity to water bodies

|                      | National       | Rural           | Urban           |
|----------------------|----------------|-----------------|-----------------|
|                      | >5 Km. | <=5 Km | Total | >5 Km. | <=5 Km | Total | >5 Km. | <=5 Km | Total |
| **Malawi**           |         |         |       |         |         |       |         |         |       |
| Food consumption score | 43.63   | 43.65   | 43.63 | 39.41*** | 43.15*** | 39.83 | 60.83*** | 46.81*** | 59.75 |
| Food consumption profile==poor | 0.16*** | 0.10*** | 0.16 | 0.20*** | 0.11*** | 0.19 | 0.03 | 0.05 | 0.03 |
| Food consumption profile==borderline | 0.39 | 0.38 | 0.39 | 0.45*** | 0.39*** | 0.45 | 0.15*** | 0.33*** | 0.16 |
| Food consumption profile==acceptable/food secure | 0.44*** | 0.52*** | 0.45 | 0.35*** | 0.50*** | 0.37 | 0.82*** | 0.62*** | 0.81 |
| **Total months hh experienced food insecurity** | 3.11* | 3.28* | 3.13 | 3.53** | 3.29** | 3.5 | 1.43*** | 3.25*** | 1.57 |
| **Tanzania**         |         |         |       |         |         |       |         |         |       |
| Food consumption score | 56.03*** | 61.54*** | 57.15 | 54.39*** | 59.10*** | 55.09 | 60.03*** | 63.85*** | 61.21 |
| Food consumption profile==poor | 0.05*** | 0.02*** | 0.05 | 0.06* | 0.03* | 0.05 | 0.03 | 0.02 | 0.03 |
| Food consumption profile==borderline | 0.18*** | 0.10*** | 0.17 | 0.21*** | 0.10*** | 0.19 | 0.11 | 0.1 | 0.11 |
| Food consumption profile==acceptable/food secure | 0.77*** | 0.88*** | 0.79 | 0.73*** | 0.87*** | 0.75 | 0.85 | 0.89 | 0.86 |
| **Total months hh experienced food insecurity** | 1.46 | 1.37 | 1.44 | 1.55 | 1.58 | 1.55 | 1.24 | 1.17 | 1.22 |
| **Uganda**           |         |         |       |         |         |       |         |         |       |
| Food consumption score | 58.65   | 58.13   | 58.58 | 57.41 | 57.68 | 57.45 | 62.48 | 59.41 | 62.01 |
| Food consumption profile==poor | 0.06 | 0.07 | 0.06 | 0.04** | 0.07** | 0.05 | 0.11 | 0.07 | 0.11 |
| Food consumption profile==borderline | 0.13** | 0.09** | 0.12 | 0.14** | 0.10** | 0.14 | 0.09 | 0.08 | 0.09 |
| Food consumption profile==acceptable/food secure | 0.81 | 0.84 | 0.82 | 0.82 | 0.83 | 0.82 | 0.8 | 0.86 | 0.81 |
| **Total months hh experienced food insecurity** | 1.42 | 1.46 | 1.42 | 1.64 | 1.7 | 1.65 | 0.73 | 0.8 | 0.74 |
| **All countries**    |         |         |       |         |         |       |         |         |       |
| Food consumption score | 54.09*** | 58.48*** | 54.83 | 51.76*** | 55.7*** | 52.32 | 60.80** | 62.47** | 61.2 |
| Food consumption profile==poor | 0.08*** | 0.04*** | 0.07 | 0.09*** | 0.06*** | 0.08 | 0.05*** | 0.03*** | 0.05 |
| Food consumption profile==borderline | 0.21*** | 0.13*** | 0.2 | 0.25*** | 0.15*** | 0.23 | 0.11 | 0.1 | 0.11 |
| Food consumption profile==acceptable/food secure | 0.71*** | 0.82*** | 0.73 | 0.67*** | 0.79*** | 0.68 | 0.83*** | 0.87*** | 0.84 |
| **Total months hh experienced food insecurity** | 1.80*** | 1.63*** | 1.77 | 2.03* | 1.93* | 2.02 | 1.14 | 1.21 | 1.15 |

* significant at 10%; ** significant at 5%; *** significant at 1%
## Supplementary Table 8 Multiple poverty indicators by proximity to water bodies

|                          | National | Rural | Urban |
|--------------------------|----------|-------|-------|
|                          | >5 Km.  | <=5 Km| Total |
| Poor household % of total households | 0.44 | 0.46 | 0.45 | 0.52** | 0.49** | 0.52 | 0.13*** | 0.31*** | 0.14 |
| Wealth index Score (PCA) | 1.46 | 1.51 | 1.47 | 1.17*** | 1.33*** | 1.19 | 2.66 | 2.62 | 2.66 |
| Per-capita expenditure International US$ | 2.93 | 2.86 | 2.92 | 2.08*** | 2.84*** | 2.17 | 6.37 | 2.97 | 6.11 |
| Distance to nearest agricultural markets Km. | 21.76*** | 27.42*** | 22.37 | 25.16*** | 30.83*** | 25.8 | 7.92*** | 5.86*** | 7.76 |
| Education of the head of the household % with no education | 0.69*** | 0.73*** | 0.7 | 0.77 | 0.76 | 0.77 | 0.37*** | 0.58*** | 0.38 |
| Education of the head of the household % with primary education | 0.19 | 0.19 | 0.19 | 0.17 | 0.18 | 0.17 | 0.28* | 0.22* | 0.28 |
| Education of the head of the household % with secondary education | 0.10*** | 0.07*** | 0.09 | 0.05 | 0.05 | 0.05 | 0.28*** | 0.17*** | 0.27 |
| Education of the head of the household % with tertiary education | 0.02** | 0.01** | 0.02 | 0.0 | 0 | 0 | 0.07* | 0.03* | 0.07 |
| Households with cultivated and/or owned land % of total households | 0.79 | 0.78 | 0.79 | 0.91*** | 0.80*** | 0.9 | 0.30*** | 0.65*** | 0.32 |
|                          | All countries |       |       |
| Poor household % of total households | 0.2 | 0.22 | 0.21 | 0.24 | 0.25 | 0.24 | 0.1 | 0.12 | 0.11 |
| Wealth index Score (PCA) | 1.54 | 1.49 | 1.54 | 1.4 | 1.4 | 1.4 | 1.97 | 1.75 | 1.94 |
| Per-capita expenditure International US$ | 3.10*** | 3.74*** | 3.2 | 2.47* | 2.85* | 2.53 | 5.05** | 6.26** | 5.23 |
| Distance to nearest agricultural markets Km. | 27.07*** | 33.96*** | 28.08 | 30.84*** | 38.80*** | 31.99 | 15.59** | 20.10** | 16.27 |
| Education of the head of the household % with no education | 0.28 | 0.25 | 0.28 | 0.28 | 0.24 | 0.27 | 0.3 | 0.27 | 0.29 |
| Education of the head of the household % with primary education | 0.49* | 0.54* | 0.5 | 0.54* | 0.61* | 0.55 | 0.34 | 0.33 | 0.33 |
| Education of the head of the household % with secondary education | 0.17 | 0.18 | 0.17 | 0.14 | 0.13 | 0.14 | 0.23* | 0.31* | 0.24 |
| Education of the head of the household % with tertiary education | 0.06** | 0.03** | 0.06 | 0.04* | 0.02* | 0.03 | 0.14 | 0.08 | 0.13 |
| Households with cultivated and/or owned land % of total households | 0.54*** | 0.41*** | 0.52 | 0.65*** | 0.54*** | 0.63 | 0.20*** | 0.04*** | 0.17 |

### Notes
- **Malawi**
- **Tanzania**
- **Uganda**
| Education of the head of the household | % with tertiary education | 0.03 | 0.02 | 0.02 | 0.01** | 0.01** | 0.01 | 0.06 | 0.05 | 0.06 |
|--------------------------------------|---------------------------|------|------|------|--------|--------|------|------|------|------|
| Households with cultivated and/or owned land | % of total households | 0.70*** | 0.52*** | 0.67 | 0.84*** | 0.74*** | 0.82 | 0.30*** | 0.21*** | 0.28 |
## Supplementary Table 9 Estimated fish consumption - in KG / per capita / year - compared to FAO Supply Data, and scenario for increasing 1% fish supply

| Country       | Malawi | Tanzania | Uganda | Total     |
|---------------|--------|----------|--------|-----------|
| Survey Year   | 2017   | 2015     | 2011   |           |
| Sample number (households) | 12447.0 | 3352.0 | 2916.0 | 18,715.0 |
| Population from the survey | 16,307,880 | 48,152,272 | 29,345,544 | 93,805,695 |
| Size(household), weighted stats | 4.3 | 4.7 | 5.7 | 5.0 |
| Sample population | 53,398 | 15,888 | 18,594 | 87,880 |
| Fish cons.(household/per week) | 0.9 | 1.0 | 1.5 | 1.0 |
| Fish cons.(per capita/per week)* | 0.21 | 0.20 | 0.25 | 0.2 |
| grams per day | 30 | 29 | 36 | 31 |
| Fish cons.(per capita/per year)*, assuming 52.14 week per year | 11.0 | 10.4 | 13.0 | 11.1 |
| FAO Fish Supply Data Year | 2017 | 2015 | 2014 |           |
| FAO Fish Supply (kg/capita/year) | 9.5 | 7.2 | 14.5 |           |
| Difference Supply/Consumption | -1.5 | -3.2 | 1.5 |           |

*This is calculated by:

1. For each household in the survey, total household fish consumption is divided by the corresponding household size
2. multiplying 1) * 52 weeks (annualized pc fish consumption)
3. weighted average of 2)
| Food item | Measure | National | Rural | Urban |
|----------|---------|----------|-------|-------|
|          | >5 Km.  | <=5 Km.  | Total | >5 Km.  | <=5 Km.  | Total | >5 Km.  | <=5 Km.  | Total |
| Fish     | Constant 2010 prices per Kg (in international US$) |        |       |       |       |       |       |       |       |       |
| Fresh fish | 1.39*** | 1.23*** | 1.37 | 1.34*** | 1.18*** | 1.32 | 1.95** | 1.58** | 1.9 |       |
| Dried fish | 1.60*** | 1.24*** | 1.49 | 1.32*** | 1.18*** | 1.26 | 1.36 | 1.44 | 1.37 |       |
| Other fish | 1.34*** | 1.19*** | 1.33 | 1.33*** | 1.14*** | 1.31 | 1.55 | 1.3 | 1.54 |       |
| Pork     | 2.85*** | 1.18*** | 1.32 | 2.65*** | 1.21*** | 1.3 | 2.53** | 2.35** | 2.52 |       |
| Beef     | 4.24 | 1.37*** | 1.3 | 3.49 | 3.7 | 3.49 | 2.7 | 2.47 |       |       |
| Eggs     | 4.25*** | 1.07*** | 1.34 | 4.39*** | 1.26*** | 1.34 | 4.27 | 2.47 | 2.72 |       |
|          | Constant 2010 prices per Kg (in international US$) |        |       |       |       |       |       |       |       |       |
|          | 4.49** | 2.69*** | 3.38 | 4.29** | 2.69*** | 3.38 | 4.22*** | 3.93*** | 5.68 |       |
|          | 3.09*** | 2.17*** | 3.26 | 3.38 | 2.17*** | 3.26 | 4.06*** | 3.93*** | 5.68 |       |
|          | 1.95** | 1.58** | 1.9 | 2.7 | 2.47 | 2.7 | 4.27 | 2.47 | 2.72 |       |
|          | 2.47 | 2.41** | 2.45 | 4.21*** | 4.57 |       |       |       |       |       |
|          | 4.42 | 4.18 | 4.36 |       |       |       |       |       |       |       |
|          | 6.26 | 5.85 | 7.26 |       |       |       |       |       |       |       |
| Poultry  | 3.94*** | 3.96*** | 3.95 | 4.84 | 4.63 | 4.81 |       |       |       |       |
| Goat     | 4.29 | 4.17 | 4.26 | 4.84 | 4.63 | 4.81 |       |       |       |       |
| Pork     | 4.69 | 4.29 | 4.58 | 5.04 | 5.59 | 5.11 |       |       |       |       |
| Beef     | 4.06 | 4.06 | 4.06 | 4.65 | 4.28 | 4.59 |       |       |       |       |
| Eggs     | 5.59* | 4.02* | 5.24 | 5.45* | 3.47* | 5.03 |       |       |       |       |
|          | 4.06*** | 3.21*** | 3.75 | 4.57*** | 3.66*** | 3.98 | 4.74*** | 4.06*** | 4.32 |       |
|          | 4.42*** | 3.66*** | 3.75 | 4.74*** | 4.06*** | 4.32 |       |       |       |       |
|          | 5.82 | 4.75 | 5.56 | 5.45* | 3.47* | 5.03 |       |       |       |       |
|          | 4.57*** | 3.47*** | 3.87 | 4.39*** | 3.47*** | 3.87 |       |       |       |       |
|          | 5.01 | 5.75 | 6.11 | 4.57 | 5.63 | 6.23 |       |       |       |       |
|          | 5.01*** | 3.67*** | 3.73 | 4.61 | 3.67 | 4.49 |       |       |       |       |
|          | 5.61 | 5.77 | 6.3 | 4.55 | 4.61 | 4.57 |       |       |       |       |
| Beef     | 4.57 | 4.49 | 4.55 | 5.61 | 5.77 | 6.3 |       |       |       |       |
| Eggs     | 4.57 | 4.49 | 4.55 | 5.61 | 5.77 | 6.3 |       |       |       |       |
|          | 6.33 | 7.52 | 6.58 | 5.45 | 5.67 | 5.49 |       |       |       |       |
|          | 5.44 | 8.07 | 5.68 | 5.45 | 5.67 | 5.49 |       |       |       |       |
|          | 4.17 | 4.02 | 4.17 | 5.45 | 5.67 | 5.49 |       |       |       |       |
|          | 2.47 | 4.54 | 4.27 | 5.25 | 5.83 | 5.28 |       |       |       |       |
|          | 4.98 | 4.99 | 4.98 | 5.47 | 5.63 | 5.49 |       |       |       |       |
|          | 4.11 | 4.26 | 4.13 | 4.55 | 4.61 | 4.57 |       |       |       |       |
|          | 4.3 | 3.98 | 4.26 | 3.93*** | 4.45*** | 4.02 |       |       |       |       |
|          | 5.82 | 6.2 | 5.9 | 5.68 | 6.2 | 5.9 |       |       |       |       |
|          | 4.27 | 5.99 | 4.69 | 4.25*** | 5.25*** | 4.38 |       |       |       |       |
|          | 3.79 | 4.02 | 3.8 | 5.06 | 5.33 | 4.58 |       |       |       |       |
|          | 4.89 | 5.39 | 4.95 | 5.06 | 5.33 | 4.58 |       |       |       |       |
|          | 3.29* | 3.01* | 3.26 | 3.59** | 4.39*** | 3.75 |       |       |       |       |
|          | 5.21 | 6.58 | 5.5 | 4.83** | 6.82** | 5.26 |       |       |       |       |
|          | 4.54*** | 5.99*** | 4.69 | 4.25*** | 5.25*** | 4.38 |       |       |       |       |
|          | 4.39*** | 4.49*** | 3.98 | 5.06 | 5.33 | 4.58 |       |       |       |       |
|          | 5.34 | 5.56 | 5.38 | 5.06 | 5.33 | 4.58 |       |       |       |       |
|          | 3.46*** | 3.98*** | 3.55 | 3.59** | 4.39*** | 3.75 |       |       |       |       |

* significant at 10%; ** significant at 5%; *** significant at 1%

value is missing if insufficient observations for statistically significant average
### Supplementary Table 11 Variable description

All variables are obtained from the LSMS-ISA household survey, except for proximity to fishing grounds where geospatial data was obtained from the Global Lakes and Wetlands Database (GLWD) (Lehner & Döll, 2004), and the European Space Agency GlobCover databases for coastlines (ESA, 2009).

| Variable                                                                 | Description                                                                                                                                                                                                 |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| **Demographic**                                                         |                                                                                                                                                                                                              |
| Rural households                                                        | Household living in rural areas (as defined by the survey)                                                                                                                                                  |
| Urban households                                                        | Household living in urban areas (as defined by the survey)                                                                                                                                                  |
| Household size                                                          | Total number of household members                                                                                                                                                                          |
| Employment                                                              | Share of household members in employment over total household members                                                                                                                                       |
| Age                                                                    | Age of the head of the household                                                                                                                                                                             |
| Male-headed household                                                   | Sex of the head of the household                                                                                                                                                                             |
| Education of the head of the household: no education, primary, secondary or tertiary | Education level attained by the head of the household: no education, primary, secondary or tertiary.                                                                                                         |
| **Food Environments – physical and economic access to food**            |                                                                                                                                                                                                              |
| Proximity to fishing grounds (km)                                       | Distance to water bodies (km) where small-scale fisheries are known to occur; calculated as the shortest distance from the household location to any point of the nearest open water body (km). Anonymity was maintained by applying a 5km buffer around the household locations. |
| Distance to nearest agriculture market (km)                             | Distance to agriculture markets                                                                                                                                                                              |
| Households unable to reach food market                                  | Households who self-reported to be unable to reach the food market                                                                                                                                              |
| Livelihoods: small-scale fishing households                             | Household with at least one member who engaged in small-scale fisheries (fishing, harvesting, processing and/or trading) in the past 12 months. In Uganda only households engaging in harvesting of fish were defined as fishing households, while in Malawi and Tanzania the definition of fishing household extends to also processing and trading. Households defined as fishing households were engaged in small-scale fisheries because the survey excluded commercial businesses, and livelihood activities were characterised by family labour inputs and a small volume of production. |
| Livelihoods: agriculture households                                    | Household with at least one member who engaged in agriculture (non-fishing) in the past 12 months.                                                                                                           |
| Livelihoods: non-agriculture/fishing households                         | Household with no members who engaged in agriculture or fishing in the past 12 months.                                                                                                                        |
| Average prices (constant 2010 in international US$) of household purchased food item per kg | Price of food item [fish, fresh fish, dried fish, other fish, poultry, goat, pork, beef, eggs] purchased and consumed over past 7 days based on average prices (constant 2010 in international US$) per kg. |
| **Socio-economic Impacts - poverty**                                    |                                                                                                                                                                                                              |
| Capital assets - wealth index                                           | Total number of assets owned by the household (durable goods - radio, bicycle, TV; utilities and infrastructure – access to protected water source and electricity) with an index developed using principal component analysis |
| Households with cultivated and/or owned land                           | Household with land                                                                                                                                                                                          |
| Per-capita monthly expenditure (local currency unit)                   | Monthly total expenditure by the household (divided by the total household members)                                                                                                                           |
| Share of households living below the national poverty line (local currency unit) | Percentage of households with per-capita monthly expenditure below the national poverty line based on cost of food and non-food basic needs (calculated by national authority) (World Bank, 2020). |
| **Food Security – diets and seasonality of subjective food insecurity** |                                                                                                                                                                                                              |
| Share (%) of households who consumed animal-source foods over the past 7 days | Percentage of households who self-reported to consume animal-source foods [fish, poultry, goat, pork, beef, eggs] at least once over 7 days.                                                              |
| Share (%) of households who consumed dried, fresh or other form of fish over the past 7 days | Percentage of households who self-reported to consume dried, fresh or other form of fish over 7 days.                                                                                                        |
| Share (%) of households who consumed fish over the past 7 days from purchased, own production or other source (including gifts). | The share of households who obtained fish for consumption over the past 7 days via purchases, own production or other sources, including gifts.                                                        |
| Number of days households consumed fish over the past 7 days            | Frequency of fish (general, dried, fresh and other) consumed over 7 days.                                                                                                                                      |
### Food consumption score (FCS)

An index capturing food consumption profiles at the household level. Based on the diversity and frequency of food groups consumed over a 7-day recall period, with weights given to groups based on nutritional value. Validated as a proxy for energy sufficiency (quantity of food) (Leroy et al., 2015; World Food Programme, 2008).

### Food consumption profile: poor, borderline, acceptable

Household with a food consumption score that is defined according to World Food Programme (2008) universal classification as poor (FCS<28), borderline (FCS>=28 and <41) or acceptable (FCS>=41), where acceptable represents food secure households.

### Food insecure household over the past 12 months

Subjective food insecurity defined as households who have experienced a situation in the last 12 months when they did not have enough food to feed the household.

### Total months household self-reported food insecurity over the past 12 months

The number of months during over the past 12 months that a household reported not having enough food to feed the household.
### Nutrient content of fish species caught from small-scale fisheries in the region and other animal source foods (per 100g edible food)

| Food name / Fish species (with local name) | Calcium (mg) | Iron (mg) | Selenium (mcg) | Zinc (mg) | Vitamin A (mcg, RAE) | Omega_3 (DHA+EPA) (g) | Protein (g) |
|-------------------------------------------|---------------|-----------|----------------|-----------|---------------------|-----------------------|-------------|
| **Small** freshwater fish (fresh)         |               |           |                |           |                     |                       |             |
| Rastrineobola argentea (Dagaa)            | 836.85        | 3.37      | 32.25          | 2.78      | 82.22               | 0.59                   | 18.03       |
| Engraulicypris sardella (Usipa)           | 735.89        | 7.08      | 59.24          | 2.21      | 49.13               | 0.32                   | 17.17       |
| Stolothrissa tanganicae (Kapenta)         | 540.42        | 4.13      | 46.37          | 2.96      | 25.11               | 0.45                   | 17.91       |
| Copadichromis virginalis (Utaka)          | 246.02        | 1.66      | 45.69          | 2.5       | 59.27               | 0.39                   | 17.99       |
| Protomelas similis                       | 226.11        | 2.02      | 52.24          | 3.08      | 24.39               | 0.3                    | 17.61       |
| Limnothrissa miodon (Kapenta)             | 309.78        | 4.57      | 51.9           | 2.8       | 10.39               | **0.51**               | 18.09       |
| **Dried small freshwater fish**           |               |           |                |           |                     |                       |             |
| Engraulicypris breianalis (Usipa)         | 1453          | 6.2       | -              | 25.4      | 66                  | -                      | 67.2        |
| Engraulicypris sardella (Usipa)           | 451           | 40.6      | -              | -         | -                   | -                      | 45.7        |
| Rhamphochromis esox (Mcheni)              | **1884**      | 20.3      | -              | -         | -                   | -                      | 39.8        |
| Copadichromis inornatus (Utaka)           | 451           | 40.6      | -              | -         | -                   | -                      | 45.7        |
| **Large** freshwater fish (fresh)         |               |           |                |           |                     |                       |             |
| Lates niloticus (Nile perch, mbuta)       | 133.57        | 1.74      | **195.52**     | 0.94      | 13.86               | 0.29                   | 20          |
| Oreochromis niloticus (Nile tilapia)      | 25.93         | 1.79      | **74.22**      | 1.91      | 3.77                | 0.41                   | 17.34       |
| Oreochromis karongae (Chambo)             | 19.93         | 1.79      | 59.53          | 2.36      | 12.29               | 0.26                   | 17.52       |
| Clarias gariepinus (Catfish, Mlamba)      | 20.16         | 1.6       | **73.31**      | 0.55      | 32.3                | 0.25                   | 17.34       |
| **Other animal-source foods**              |               |           |                |           |                     |                       |             |
| Beef                                      | 1             | 7.5       | -              | 1.77      | -                   | -                      | 20.5        |
| Beef (liver)                              | 7             | 8.8       | -              | **3.5**   | **4970**            | -                      | 19.4        |
| Goat                                      | 11            | 2.4       | -              | 3.45      | 0                   | -                      | 17.5        |
| Pork                                      | 10            | 1.4       | -              | **3.6**   | 0                   | -                      | 16.8        |
| Chicken meat (with skin)                  | 8             | 1         | -              | 1.6       | 7                   | -                      | 21.1        |
| Chicken egg                               | 39            | 1.8       | -              | 1.15      | **67**              | -                      | 12.6        |
| Cow's milk                                | 120           | 0.1       | -              | 0.38      | 44                  | -                      | 2.9         |

*Fresh water fish species (small and large) are those most commonly caught from small-scale fisheries in Malawi, Tanzania and Uganda and are defined as small (maximum length <25cm) and large (maximum length >25cm). Their nutrient values are derived from FishBase and a nutrition modelling study. Data source: (FishBase, 2021; FAO et al., n.d.).

**Note:** Dried small freshwater fish and other animal-source foods and their nutrient values are derived from Malawi’s Food Composition Table. Data source: (MAFOODS, 2019). Due to the different data sources and methods used in calculating the nutritional value of dried fish compared with fresh, no direct comparisons can be made between the two. Note that Engralicypris breianalis is the same species as E. sardella, and taxonomically E. breianalis is a misnomer. In addition, Utaka is a common local name for a mixture of many small pelagic cichlids from Lake Malawi.

FAO, Duke University, & WorldFish. (n.d.). Illuminating Hidden Harvests: The contribution of small-scale fisheries to sustainable development. FishBase. 2021. FishBase. www.fishbase.org. Accessed June 30, 2021

MAFOODS. (2019). *Malawian Food Composition Table 2019.*
### % of households that consumed:

|          | Mean  | Std. Err. | Margin of error | [95% Conf. Interval] |
|----------|-------|-----------|----------------|---------------------|
| Fish     | 73%   | 0.004729  | 0.00926923     | 72.55% - 74.40%     |
| Poultry  | 13%   | 0.003744  | 0.00733824     | 12.14% - 13.61%     |
| Goat     | 13%   | 0.003833  | 0.005595996    | 12.69% - 14.20%     |
| Pork     | 7%    | 0.002855  | 0.00626592     | 6.07% - 7.19%       |
| Beef     | 9%    | 0.003197  | 0.00626592     | 8.84% - 10.09%      |
| Eggs     | 31%   | 0.005114  | 0.01002265     | 30.08% - 32.09%     |

|          | Mean  | Std. Err. | Margin of error | [95% Conf. Interval] |
|----------|-------|-----------|----------------|---------------------|
| Fish     | 71%   | 0.010765  | 0.02109908     | 69.35% - 73.05%     |
| Poultry  | 17%   | 0.004010  | 0.00786038     | 15.41% - 18.40%     |
| Goat     | 12%   | 0.000908  | 0.00184714     | 11.10% - 13.87%     |
| Pork     | 4%    | 0.00396   | 0.00776238     | 3.13% - 4.68%       |
| Beef     | 40%   | 0.009908  | 0.0194187      | 37.92% - 41.80%     |
| Eggs     | 20%   | 0.008046  | 0.01576952     | 18.05% - 21.20%     |

### Price per Kg

|          | Mean  | Std. Err. | Margin of error | [95% Conf. Interval] |
|----------|-------|-----------|----------------|---------------------|
| Fish     | 1.37  | 0.011363  | 0.02272128     | 1.3501 - 1.3946     |
| Poultry  | 3.37  | 0.082527  | 0.16175316     | 3.2114 - 3.5350     |
| Goat     | 2.49  | 0.054781  | 0.10737056     | 2.3851 - 2.5999     |
| Pork     | 2.61  | 0.136818  | 0.2681623      | 2.3455 - 2.8819     |
| Beef     | 2.60  | 0.01761   | 0.03451462     | 2.5671 - 2.6361     |
| Eggs     | 2.15  | 0.009829  | 0.01926484     | 2.1343 - 2.1729     |

**Note:** Confidence interval around the mean are calculated as: mean +/- margin of error

The confidence interval indicate that we are 95% confident that the real mean of each calculated statistics is comprised which is the lower and upper bounds of our estimated sample mean.

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**Supplementary Fig 1.** Share of households (% of total) consuming animal source foods and prices of purchased food (average price per kilogram in international US$). Red highlights fish. Lines show 95% confidence interval (mean +/- 1.96*standard error).
Spatial distribution of fishing households (red dots) and non-fishing households (green dots) by open inland water bodies (≥0.1 km²) and coastlines for Uganda, Tanzania and Malawi.
Supplementary Fig 2. Spatial distribution of households reporting any fish consumption (green dots) by open inland water bodies (≥0.1 km2) and coastlines for Uganda, Tanzania and Malawi. Analysis is of 18,715 households and approximately 87,879 people; a sample framed to be representative of the total population of each country (93.8 million population in total for all three countries). Data source: the World Bank’s Living Standards Measurement Surveys and Integrated Surveys on Agriculture (LSMS-ISA) for Malawi (2016–17), Tanzania (2014–15) and Uganda (2010–11); Global Lakes and Wetlands Database (GLWD) (Lehner & Döll, 2004), and the European Space Agency GlobCover databases for coastlines (ESA, 2009).
Spatial distribution of fish consumption (kg/household/week) by open inland water bodies (≥0.1 km²) and coastlines for Uganda, Tanzania and Malawi.
| Distance | Quintile | National Mean fish consumption | Std. Err. | Rural Mean fish consumption | Std. Err. | Urban Mean fish consumption | Std. Err. |
|----------|----------|--------------------------------|-----------|----------------------------|-----------|----------------------------|-----------|
|           |          | Mean fish consumption | Std. Err. | Mean fish consumption | Std. Err. | Mean fish consumption | Std. Err. |
|           |          | First quintile | Std. error | Fifth quintile | Std. error | First quintile | Std. error |
| >5 Km    | 1        | 0.42           | 0.0168263 | 0.42           | 0.015819  | 0.56           | 0.1545944 |
|          | 5        | 1.27           | 0.0413091 | 0.88           | 0.0478636 | 1.61           | 0.0625937 |
| <=5 Km   | 1        | 1.18           | 0.1113746 | 1.18           | 0.1133232 | 1.26           | 0.5340947 |
|          | 5        | 1.82           | 0.1798429 | 1.87           | 0.2289092 | 1.70           | 0.2123266 |
| >5 Km    | 1        | 0.53           | 0.0373447 | 0.53           | 0.0389429 | 0.49           | 0.0645484 |
|          | 5        | 0.84           | 0.0484187 | 0.84           | 0.1118638 | 0.84           | 0.0508833 |
| <=5 Km   | 1        | 1.37           | 0.1503724 | 1.44           | 0.170413  | 1.10           | 0.3123995 |
|          | 5        | 1.43           | 0.113695  | 1.49           | 0.197979  | 1.42           | 0.1264895 |
| >5 Km    | 1        | 0.99           | 0.0903261 | 0.95           | 0.08404   | 1.26           | 0.3843559 |
|          | 5        | 1.87           | 0.176383  | 2.14           | 0.373277  | 1.72           | 0.1772149 |
| <=5 Km   | 1        | 0.78           | 0.1040492 | 0.78           | 0.106407  | 0.85           | 0.4708359 |
|          | 5        | 1.84           | 0.2872595 | 1.95           | 0.426442  | 1.75           | 0.3863968 |
| >5 Km    | 1        | 0.56           | 0.027457  | 0.55           | 0.027833  | 0.73           | 0.1405518 |
|          | 5        | 1.13           | 0.0414617 | 1.07           | 0.082919  | 1.17           | 0.104528  |
| <=5 Km   | 1        | 1.24           | 0.1028901 | 1.27           | 0.110563  | 1.09           | 0.273517  |
|          | 5        | 1.52           | 0.0978253 | 1.73           | 0.164864  | 1.46           | 0.116823  |

**Malawi graph (3) fish consumption**

- **First quintile**
  - Rural: Mean fish consumption = 0.42, Std. error = 0.02
  - Urban: Mean fish consumption = 0.56, Std. error = 0.05
- **Fifth quintile**
  - Rural: Mean fish consumption = 0.88, Std. error = 0.05
  - Urban: Mean fish consumption = 1.70, Std. error = 0.21

**Tanzania graph (3) fish consumption**

- **First quintile**
  - Rural: Mean fish consumption = 0.53, Std. error = 0.04
  - Urban: Mean fish consumption = 0.49, Std. error = 0.06
- **Fifth quintile**
  - Rural: Mean fish consumption = 0.84, Std. error = 0.11
  - Urban: Mean fish consumption = 1.42, Std. error = 0.13

**Uganda graph (3) fish consumption**

- **First quintile**
  - Rural: Mean fish consumption = 0.95, Std. error = 0.08
  - Urban: Mean fish consumption = 1.26, Std. error = 0.38
- **Fifth quintile**
  - Rural: Mean fish consumption = 2.14, Std. error = 0.37
  - Urban: Mean fish consumption = 1.72, Std. error = 0.43
Data for Graph 4

| Rural Area          | Urban Area          | Proximity | Rural Area          | Urban Area          | Proximity |
|---------------------|---------------------|-----------|---------------------|---------------------|-----------|
| Malawi urban >5 km  | Uganda rural ≤5 km  | >5 km     | Malawi rural >5 km  | Uganda urban ≤5 km  | >5 km     |
| 2.9                 | 2.5                 | 2.3       | 2.1                 | 2.1                 | 1.7       |
| Uganda urban >5 km  | Malawi urban ≤5 km  | >5 km     | Tanzania rural ≤5 km| Tanzania rural >5 km| >5 km     |
| 1.4                 | 1.4                 | 1.3       | 1.0                 | 1.6                 | 1.6       |

**Supplementary Fig 4.** Difference in the quantities of fish consumed (kg/household/week) between richest (fifth quintile) and poorest (first quintile) households, by rural and urban areas and proximate (<5km) or distant (>5km) from water bodies in Malawi, Tanzania and Uganda. Graph depicts greater inequalities in consumption of fish in contexts on the left, and lower inequalities on the right. Green represents rural areas, and blue urban, whilst solid colours represent proximate to fishing grounds, and faded distant.
Supplementary Fig 3. Fish consumption (kg/household/week) by richest (fifth quintile) and poorest (first quintile) households, in rural and urban areas that are proximate (<5km) or distant (>5km) from water bodies in Malawi, Tanzania and Uganda.
Supplementary Fig 5. Fish consumption by proximity to water bodies across rural Malawi, Tanzania and Uganda. Representing the average difference in the share of total households consuming dried and fresh fish, quantity of fish consumed (kg/household/week) and frequency (number of days out of 7 days).
### Malawi fish consumption

|                       | Malawi |       |       |
|-----------------------|--------|-------|-------|
|                       | > 5Km  | <= 5Km|
| Poor                  |        |       |       |
| Std error             | 0.02   | 0.19  |       |
| Borderline            |        |       |       |
| Std error             | 0.02   | 0.07  |       |
| Acceptable/food secure|        |       |       |
| Std error             | 0.03   | 0.09  |       |

### Tanzania fish consumption

|                       | Tanzania |       |       |
|-----------------------|----------|-------|-------|
|                       | > 5Km    | <= 5Km|
| Poor                  |         |       |       |
| Std error             | 0.06    | 0.14  |       |
| Borderline            |         |       |       |
| Std error             | 0.03    | 0.10  |       |
| Acceptable/food secure|         |       |       |
| Std error             | 0.03    | 0.09  |       |

### Uganda fish consumption

|                       | Uganda |       |       |
|-----------------------|--------|-------|-------|
|                       | > 5Km  | <= 5Km|
| Poor                  |        |       |       |
| Std error             | 0.13   | 0.07  |       |
| Borderline            |        |       |       |
| Std error             | 0.06   | 0.14  |       |
| Acceptable/food secure|        |       |       |
| Std error             | 0.06   | 0.14  |       |

### All countries fish consumption

|                       | All countries |       |       |
|-----------------------|---------------|-------|-------|
|                       | > 5Km         | <= 5Km|
| Poor                  |               |       |       |
| Std error             | 0.02          | 0.11  |       |
| Borderline            |               |       |       |
| Std error             | 0.02          | 0.06  |       |
| Acceptable/food secure|               |       |       |
| Std error             | 0.02          | 0.07  |       |
Supplementary Fig 6. Fish consumption (average kg/household/week) by food consumption profile and proximity to water bodies. Note: food consumption profile is based on the household Food Consumption Score (FCS), which measures frequency and diversity of food groups con
Supplementary Fig 7. Conceptual framework. (Adapted from the Food Systems Framework (HLPE, 2017) with permission). Boxes and arrows represent the components and relationships analysed in the study.