**Supplementary file S1: Estimates of minimum dietary diversity, minimum meal frequency, and minimum adequate diet for children 6-23 months of age**

**A. Children 6-23 months fed 5+ food groups**

| Country        | Survey       | Total | Urban | Rural | Lowest | Second | Middle | Fourth | Highest |
|----------------|--------------|-------|-------|-------|--------|--------|--------|--------|---------|
| Angola         | 2015-16 DHS  | 29.1  | 33.1  | 22.9  | 19.3   | 23.6   | 29.2   | 34.7   | 44.7    |
| Benin          | 2017-18 DHS  | 25.2  | 23.5  | 26.3  | 23     | 25.2   | 27.1   | 25.2   | 25.5    |
| Benin          | 2011-12 DHS  | 28.7  | 33.3  | 25.4  | 20.4   | 23     | 28     | 30.8   | 41.2    |
| Burkina Faso   | 2010 DHS     | 5.1   | 11.3  | 3.7   | 3.5    | 3.2    | 3.9    | 4.1    | 12.7    |
| Burundi        | 2016-17 DHS  | 17.6  | 41.2  | 15.4  | 8.7    | 10     | 17.1   | 20.2   | 38.1    |
| Burundi        | 2010 DHS     | 16.5  | 29.2  | 15.3  | 11.6   | 12.3   | 11.2   | 21.8   | 27.3    |
| Cameroon       | 2011 DHS     | 25    | 33    | 18.9  | 7.7    | 18.5   | 30.1   | 31.7   | 42.7    |
| Chad           | 2014-15 DHS  | 9.3   | 18    | 7.4   | 4.6    | 5.2    | 6.8    | 12.7   | 20.5    |
| Comoros        | 2012 DHS     | 21.5  | 28.6  | 18.7  | 18.9   | 20.1   | 21.8   | 24.5   | 23.1    |
| Congo          | 2011-12 DHS  | 15.9  | 17.6  | 13.2  | 11.6   | 15     | 19.8   | 16     | 18.5    |
| DRC            | 2013-14 DHS  | 17.2  | 25.2  | 13.6  | 10.5   | 14.5   | 13.1   | 22.9   | 28.1    |
| Cote d'Ivoire  | 2011-12 DHS  | 7.6   | 12.9  | 4.3   | 2.4    | 5.5    | 6.6    | 10.9   | 16.6    |
| Ethiopia       | 2016 DHS     | 12.5  | 28.1  | 10.3  | 6.5    | 10.1   | 11.8   | 12.6   | 25.6    |
| Ethiopia       | 2011 DHS     | 4.4   | 10.1  | 3.5   | 1.3    | 4.4    | 2.7    | 3.7    | 11.6    |
| Gabon          | 2012 DHS     | 17.8  | 18.5  | 14.4  | 11.9   | 18     | 19.9   | 18.7   | 22.1    |
| Gambia         | 2013 DHS     | 10.3  | 14    | 7.3   | 7.1    | 7.8    | 9.6    | 14.7   | 14      |
| Ghana          | 2014 DHS     | 24.4  | 28.9  | 20.7  | 15.5   | 14.8   | 24.5   | 29     | 42.2    |
| Guinea         | 2018 DHS     | 13.8  | 20.5  | 10.9  | 7.4    | 10.1   | 11.1   | 19.4   | 24      |
| Guinea         | 2012 DHS     | 6.4   | 13.4  | 3.7   | 2.8    | 2.3    | 4.6    | 8.3    | 16.3    |
| Kenya          | 2014 DHS     | 36.3  | 50.4  | 28.3  | 18.2   | 25.8   | 33.7   | 50.7   | 57.7    |
| Lesotho        | 2014 DHS     | 16.9  | 26.5  | 13.6  | 8.2    | 12     | 13     | 21.2   | 37      |
| Liberia        | 2013 DHS     | 8.3   | 9     | 7.7   | 7.6    | 4.6    | 7.9    | 12.5   | 10.2    |
| Malawi         | 2015-16 DHS  | 22.9  | 39    | 20.4  | 14.3   | 19.3   | 21.7   | 24.6   | 42      |
| Mali           | 2018 DHS     | 21.8  | 38.3  | 17.3  | 17.3   | 13.7   | 14.9   | 24.4   | 41.8    |
| Country       | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Year 7 | Year 8 |
|--------------|--------|--------|--------|--------|--------|--------|--------|--------|
| Mali         | 2012-13 DHS | 18.5 | 27.2 | 16.3 | 12.8 | 14.7 | 15.4 | 20.5 | 30.3 |
| Mozambique   | 2011 DHS | 27.7 | 26 | 28.3 | 30.5 | 26.9 | 31 | 21.7 | 27.4 |
| Namibia      | 2013 DHS | 24.9 | 39 | 12.8 | 9.2 | 14.5 | 23.8 | 37.4 | 52.7 |
| Niger        | 2012 DHS | 8.5 | 26.6 | 5.4 | 3.5 | 4.3 | 4.4 | 8 | 22 |
| Nigeria      | 2018 DHS | 22.6 | 29 | 18.6 | 16.3 | 16.3 | 19.7 | 27.5 | 37.3 |
| Nigeria      | 2013 DHS | 15.5 | 22.1 | 11.8 | 8 | 10.6 | 16.4 | 21 | 24.8 |
| Rwanda       | 2014-15 DHS | 28.2 | 44.5 | 24.9 | 14.9 | 21.5 | 24.1 | 41.2 | 47 |
| Rwanda       | 2010 DHS | 24.6 | 45.3 | 22.1 | 16.9 | 20 | 23.1 | 23.4 | 46.7 |
| Senegal      | 2017 DHS | 20.3 | 32.7 | 13.1 | 8.1 | 11.7 | 17.8 | 31.4 | 41.9 |
| Senegal      | 2016 DHS | 12.6 | 16.9 | 10.4 | 8.7 | 10.8 | 13.8 | 16 | 16.8 |
| Senegal      | 2015 DHS | 16 | 16.3 | 15.8 | 10.3 | 16.9 | 18.3 | 17.4 | 20.1 |
| Senegal      | 2014 DHS | 16.3 | 18.7 | 14.5 | 10.5 | 14.8 | 23.9 | 9.6 | 24.5 |
| Senegal      | 2012-13 DHS | 15.9 | 26.3 | 10.8 | 7.6 | 10.6 | 16 | 18.2 | 33.1 |
| Senegal      | 2010-11 DHS | 23.6 | 32.4 | 18 | 12.9 | 16 | 26.5 | 24.9 | 44.7 |
| Sierra Leone | 2013 DHS | 13.4 | 20 | 11.2 | 8.9 | 11.4 | 11.2 | 15 | 25.1 |
| South Africa | 2016 DHS | 39.9 | 44.2 | 33.5 | 37.7 | 33.1 | 39.7 | 43.1 | 51.4 |
| Tanzania     | 2015-16 DHS | 21.5 | 32.9 | 17.2 | 12.7 | 12.9 | 18.5 | 28.1 | 40.4 |
| Togo         | 2013-14 DHS | 18.3 | 24.6 | 14.8 | 17.1 | 14.2 | 12 | 19.3 | 30.1 |
| Uganda       | 2016 DHS | 24.9 | 28.9 | 23.8 | 18.8 | 23.6 | 22.8 | 26.5 | 33.9 |
| Uganda       | 2011 DHS | 10.2 | 18.4 | 8.9 | 4 | 6.1 | 11.1 | 12.9 | 19.7 |
| Zambia       | 2013-14 DHS | 18.4 | 24.4 | 15.3 | 13.7 | 15.6 | 15.3 | 20.7 | 32.2 |
| Zimbabwe     | 2015 DHS | 22.6 | 37.4 | 17 | 13.1 | 17.8 | 18.2 | 28.5 | 43.7 |
| Zimbabwe     | 2010-11 DHS | 17.9 | 28.4 | 13.7 | 10.1 | 12.2 | 18.3 | 20.9 | 33.2 |

Percentage of children age 6-23 months fed five or more food groups. The food groups are 1. breastmilk 2. infant formula, milk other than breast milk, cheese or yogurt or other milk products; 3. foods made from grains, roots, and tubers, including porridge and fortified baby food from grains; 4. vitamin A-rich fruits and vegetables (and red palm oil); 5. other fruits and vegetables; 6. eggs; 7. meat, poultry, fish, and shellfish (and organ meats); 8. legumes and nuts.

**B. Children 6-23 months of age meeting the minimum meal frequency (MMF)**
| Country       | Survey       | Total | Urban | Rural | Lowest | Second | Middle | Fourth | Highest |
|---------------|--------------|-------|-------|-------|--------|--------|--------|--------|---------|
| Angola        | 2015-16 DHS  | 32.4  | 36.2  | 26.6  | 28.3   | 23.6   | 30.5   | 36     | 50.4    |
| Benin         | 2017-18 DHS  | 44.9  | 45.6  | 44.5  | 42.3   | 43.2   | 46.9   | 43.3   | 49.3    |
| Benin         | 2011-12 DHS  | 41.8  | 45.2  | 39.3  | 36.7   | 37.7   | 40.8   | 44.7   | 48.8    |
| Burkina Faso  | 2010 DHS     | 36.8  | 38.3  | 36.5  | 36     | 36.4   | 33.5   | 37.6   | 42.1    |
| Burundi       | 2016-17 DHS  | 39.2  | 59.2  | 37.4  | 34     | 32.1   | 40.3   | 36.7   | 58      |
| Burundi       | 2010 DHS     | 31.9  | 40.1  | 31.1  | 28.1   | 29.4   | 28.5   | 34.2   | 40.4    |
| Cameroon      | 2011 DHS     | 28.2  | 25.7  | 30.2  | 38.8   | 29.6   | 21.5   | 23.7   | 25.4    |
| Chad          | 2014-15 DHS  | 37.1  | 38.7  | 36.8  | 32.3   | 31.1   | 39.5   | 45     | 39.4    |
| Comoros       | 2012 DHS     | 28.7  | 28    | 29    | 21.3   | 28.1   | 37.4   | 24.1   | 32.5    |
| Congo         | 2011-12 DHS  | 23.6  | 21.7  | 26.7  | 27.3   | 20.2   | 22.9   | 27.8   | 18.9    |
| DRC           | 2013-14 DHS  | 34.6  | 30.7  | 36.4  | 35.3   | 37.5   | 34.6   | 33.6   | 31.2    |
| Cote d'Ivoire | 2011-12 DHS  | 40    | 41.8  | 38.9  | 35.7   | 45.7   | 39     | 35.9   | 46.3    |
| Ethiopia      | 2016 DHS     | 45.1  | 59.2  | 43.1  | 38.3   | 41.4   | 48.7   | 45     | 55.2    |
| Ethiopia      | 2011 DHS     | 48.4  | 52    | 47.8  | 41.9   | 47.1   | 51.3   | 50.8   | 53.2    |
| Gabon         | 2012 DHS     | 29.9  | 30    | 29.3  | 29.5   | 26     | 34.9   | 27.5   | 31.9    |
| Gambia        | 2013 DHS     | 57.5  | 58.4  | 56.8  | 54.5   | 56.5   | 58     | 63.5   | 55.5    |
| Ghana         | 2014 DHS     | 43.3  | 44.5  | 42.2  | 41     | 35.8   | 47.3   | 46.1   | 47.9    |
| Guinea        | 2018 DHS     | 23.7  | 30.2  | 20.9  | 18.3   | 22.2   | 20.4   | 24.6   | 35.3    |
| Guinea        | 2012 DHS     | 30.1  | 37    | 27.5  | 25.2   | 24.4   | 25.3   | 38.9   | 39.7    |
| Kenya         | 2014 DHS     | 50.6  | 58.9  | 45.9  | 41.8   | 45.8   | 51.2   | 53.6   | 62.8    |
| Lesotho       | 2014 DHS     | 60.4  | 59.4  | 60.7  | 59.4   | 66.1   | 59.9   | 54.3   | 63.6    |
| Liberia       | 2013 DHS     | 29.8  | 34.3  | 25.1  | 22.9   | 29.4   | 29.7   | 30.8   | 40.7    |
| Malawi        | 2015-16 DHS  | 29.2  | 37.1  | 27.9  | 24.2   | 27.8   | 30.6   | 30.6   | 36.1    |
| Mali          | 2018 DHS     | 30.1  | 36.9  | 28.2  | 25.7   | 28     | 31.7   | 28     | 37.5    |
| Mali          | 2012-13 DHS  | 27.7  | 29.8  | 27.1  | 28.2   | 23.4   | 26.7   | 28.2   | 32.5    |
| Mozambique    | 2011 DHS     | 41.1  | 46.1  | 39.3  | 43.1   | 35.5   | 38.1   | 40.6   | 51.6    |
| Country      | Survey Year | MMF 6-8 mo  | MMF 9-23 mo | MMF 6-8 mo  | MMF 9-23 mo | MMF 6-8 mo  | MMF 9-23 mo | MMF 6-8 mo  | MMF 9-23 mo |
|-------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|
| Namibia     | 2013 DHS    | 40           | 48.9        | 32.5         | 25.4        | 40.3         | 39.1        | 40.2         | 64.1        |
| Niger       | 2012 DHS    | 51.1         | 49.9        | 51.4         | 44.8        | 50.3         | 51.7        | 56.5         | 51.3        |
| Nigeria     | 2018 DHS    | 41.8         | 41.5        | 42.1         | 42.6        | 41.6         | 39.5        | 40.1         | 46          |
| Nigeria     | 2013 DHS    | 57.9         | 56.6        | 58.5         | 60.2        | 60.1         | 57.3        | 56.3         | 54.3        |
| Rwanda      | 2014-15 DHS | 47.1         | 52.5        | 46.1         | 37.5        | 45.4         | 44.6        | 55.3         | 57.7        |
| Rwanda      | 2010 DHS    | 50.7         | 56.9        | 50           | 45.7        | 47.3         | 46.5        | 56.5         | 61.7        |
| Senegal     | 2017 DHS    | 30.6         | 31.4        | 30           | 27.5        | 29.8         | 31          | 28.8         | 37.4        |
| Senegal     | 2016 DHS    | 34.7         | 40.3        | 31.9         | 31.9        | 29.8         | 29.4        | 38.6         | 48.9        |
| Senegal     | 2015 DHS    | 40.5         | 44          | 38.9         | 36.6        | 39.4         | 40.1        | 42.1         | 47.7        |
| Senegal     | 2014 DHS    | 34.6         | 36.1        | 33.5         | 32.1        | 34.1         | 35.3        | 29.1         | 44          |
| Senegal     | 2012-13 DHS | 35           | 43.2        | 30.9         | 32          | 33.7         | 33.7        | 32.7         | 45          |
| Senegal     | 2010-11 DHS | 34           | 34          | 33.9         | 35.1        | 35.4         | 34.3        | 30.5         | 34.4        |
| Sierra Leone| 2013 DHS    | 38.7         | 46.2        | 36.2         | 31.1        | 36.5         | 37.6        | 43.5         | 50.2        |
| South Africa| 2016 DHS    | 50.2         | 52.9        | 46           | 41.5        | 49.4         | 45.3        | 56.6         | 65.6        |
| Tanzania    | 2015-16 DHS | 39.9         | 36.4        | 41.2         | 42.1        | 39.6         | 42.1        | 35.7         | 39.3        |
| Togo        | 2013-14 DHS | 45.9         | 42.5        | 47.8         | 56.9        | 45.2         | 42.5        | 38           | 47.3        |
| Uganda      | 2016 DHS    | 41.4         | 43.3        | 40.8         | 35.8        | 41          | 41.7        | 40.8         | 48.2        |
| Uganda      | 2011 DHS    | 44.7         | 48.9        | 44.1         | 35          | 43.3         | 48.8        | 45           | 54.7        |
| Zambia      | 2013-14 DHS | 42.2         | 46.3        | 40           | 35          | 40.6         | 42          | 47.2         | 51.2        |
| Zimbabwe    | 2015 DHS    | 35.8         | 41.2        | 33.7         | 28.1        | 33.1         | 37          | 38.1         | 48.6        |
| Zimbabwe    | 2010-11 DHS | 45.2         | 52.5        | 42.2         | 42.3        | 40.4         | 44.2        | 44.7         | 58          |

Minimum Meal Frequency (MMF): Percentage of children age 6-23 months fed the minimum meal frequency defined as receiving solid or semi-solid food at least twice a day for infants 6-8 months and at least three times a day for children 9-23 months.
### C. Children 6-23 months of age meeting the minimum adequate diet (MAD)

| Country      | Survey     | Total | Urban | Rural | Lowest | Second | Middle | Fourth | Highest |
|--------------|------------|-------|-------|-------|--------|--------|--------|--------|---------|
| Angola       | 2015-16 DHS| 13.1  | 15.5  | 9.4   | 8.2    | 8.9    | 14.1   | 14.9   | 22.9    |
| Benin        | 2017-18 DHS| 14.3  | 14.1  | 14.5  | 14.9   | 14.4   | 14     | 13.2   | 15.2    |
| Benin        | 2011-12 DHS| 15.8  | 18.6  | 13.8  | 12.1   | 11.5   | 14.5   | 16.8   | 23.7    |
| Burkina Faso | 2010 DHS   | 3.1   | 6.4   | 2.4   | 2.5    | 1.8    | 2.1    | 2.6    | 7.6     |
| Burundi      | 2016-17 DHS| 9.8   | 28.1  | 8.1   | 3.6    | 4.4    | 10.4   | 10.5   | 24.7    |
| Burundi      | 2010 DHS   | 8.8   | 18.3  | 7.8   | 5.1    | 5.5    | 6.2    | 11.7   | 16.4    |
| Cameroon     | 2011 DHS   | 5.5   | 6.9   | 4.5   | 2.9    | 5      | 5.9    | 7.2    | 7.4     |
| Chad         | 2014-15 DHS| 5.7   | 8.5   | 5     | 3.2    | 2.5    | 4.4    | 9.9    | 10      |
| Comoros      | 2012 DHS   | 5.7   | 7.7   | 4.9   | 4.3    | 4.9    | 6.3    | 6.1    | 7.5     |
| Congo        | 2011-12 DHS| 4.9   | 4.8   | 5.1   | 4.6    | 4.4    | 7.6    | 4.4    | 3.5     |
| DRC          | 2013-14 DHS| 8.4   | 12    | 6.8   | 5.2    | 8.1    | 6      | 10     | 13.9    |
| Cote d'Ivoire| 2011-12 DHS| 4.6   | 6.9   | 3.1   | 2.2    | 4.5    | 3      | 6.4    | 8.4     |
| Ethiopia     | 2016 DHS   | 7.3   | 18.5  | 5.7   | 2.8    | 6.7    | 8      | 5.2    | 16.2    |
| Ethiopia     | 2011 DHS   | 4.1   | 9.2   | 3.2   | 1.2    | 3.8    | 2.7    | 3.6    | 10.9    |
| Gabon        | 2012 DHS   | 4.7   | 4.6   | 5.2   | 6.1    | 3.9    | 3.2    | 3.7    | 7.5     |
| Gambia       | 2013 DHS   | 8.3   | 11.1  | 6     | 5.4    | 7.1    | 8.1    | 12.4   | 9.4     |
| Ghana        | 2014 DHS   | 13.3  | 14.4  | 12.3  | 11.4   | 8      | 15.7   | 11.4   | 21.7    |
| Guinea       | 2018 DHS   | 4.3   | 7.3   | 3     | 1.1    | 2.8    | 4.3    | 5.7    | 8.7     |
| Guinea       | 2012 DHS   | 3.7   | 6.9   | 2.5   | 1.7    | 0.8    | 3      | 5.8    | 8.3     |
| Kenya        | 2014 DHS   | 21.8  | 31.2  | 16.5  | 10.3   | 15.9   | 19.3   | 29.7   | 36.5    |
| Lesotho      | 2014 DHS   | 11.3  | 18.3  | 9     | 5.4    | 8.4    | 6.4    | 16.6   | 24.6    |
| Liberia      | 2013 DHS   | 4.1   | 5.3   | 2.9   | 3      | 1.7    | 3.3    | 7.5    | 6.5     |
| Malawi       | 2015-16 DHS| 8.1   | 16    | 6.8   | 3.6    | 6.4    | 7.2    | 10.6   | 16.5    |
| Mali         | 2018 DHS   | 8.9   | 18.4  | 6.4   | 6      | 5.4    | 6      | 9.8    | 19      |
| Mali         | 2012-13 DHS| 7.7   | 11.1  | 6.8   | 7      | 4.2    | 5.7    | 8.5    | 13.6    |
| Mozambique   | 2011 DHS   | 13    | 12.3  | 13.3  | 16.9   | 12.1   | 13.8   | 7.7    | 13.7    |
| Country      | Year          | Under 5 Mortality Rate | Infant Mortality Rate | Child Mortality Rate | Maternal Mortality Rate | Under 5 Mortality Rate | Infant Mortality Rate | Child Mortality Rate | Maternal Mortality Rate |
|-------------|---------------|------------------------|-----------------------|----------------------|-------------------------|------------------------|-----------------------|----------------------|-------------------------|
| Namibia     | 2013 DHS      | 12.4                   | 20.3                  | 5.7                  | 2.7                     | 6.6                    | 11                    | 18.2                 | 32                      |
| Niger       | 2012 DHS      | 5.5                    | 15.3                  | 3.9                  | 2.7                     | 3.1                    | 3.5                   | 5.5                  | 12.7                    |
| Nigeria     | 2018 DHS      | 10.6                   | 14                    | 8.5                  | 7.5                     | 8                      | 8.1                   | 12.6                 | 18.8                    |
| Nigeria     | 2013 DHS      | 10.2                   | 13.7                  | 8.2                  | 6                       | 7.8                    | 10.4                  | 13.7                 | 14.9                    |
| Rwanda      | 2014-15 DHS   | 18.1                   | 29.8                  | 15.7                 | 7.6                     | 13.7                   | 15.7                  | 28.1                 | 31                      |
| Rwanda      | 2010 DHS      | 16.8                   | 32.1                  | 15                   | 11.3                    | 12.2                   | 14                    | 17.5                 | 34.8                    |
| Senegal     | 2017 DHS      | 8                      | 10.9                  | 6.3                  | 4.4                     | 5                      | 8.3                   | 11.3                 | 13.5                    |
| Senegal     | 2016 DHS      | 6.6                    | 9.5                   | 5.2                  | 4                       | 5.5                    | 5.7                   | 9.1                  | 11.4                    |
| Senegal     | 2015 DHS      | 10.2                   | 10.9                  | 9.9                  | 6.8                     | 10.8                   | 9.8                   | 11.5                 | 14.1                    |
| Senegal     | 2014 DHS      | 8                      | 8.6                   | 7.6                  | 5.7                     | 7.8                    | 11.3                  | 2.7                  | 13.2                    |
| Senegal     | 2012-13 DHS   | 9.6                    | 15.6                  | 6.6                  | 5.4                     | 8.3                    | 7.9                   | 10.3                 | 19.3                    |
| Senegal     | 2010-11 DHS   | 10.1                   | 13.5                  | 8                    | 6                       | 8.1                    | 11.3                  | 11.2                 | 16.3                    |
| Sierra Leone| 2013 DHS      | 6.9                    | 11.6                  | 5.4                  | 2.9                     | 5.6                    | 5.9                   | 7.9                  | 15.8                    |
| South Africa| 2016 DHS      | 22.5                   | 25.2                  | 18.5                 | 17.3                    | 16                     | 22.5                  | 25.9                 | 38.5                    |
| Tanzania    | 2015-16 DHS   | 8.7                    | 12                    | 7.4                  | 6.4                     | 5.8                    | 7.1                   | 9.4                  | 16.4                    |
| Togo        | 2013-14 DHS   | 12.1                   | 13.7                  | 11.2                 | 13.7                    | 11.4                   | 8.7                   | 10.7                 | 16.5                    |
| Uganda      | 2016 DHS      | 14.2                   | 16.2                  | 13.7                 | 10.3                    | 13.9                   | 12.9                  | 14.4                 | 20.1                    |
| Uganda      | 2011 DHS      | 5.9                    | 10.1                  | 5.3                  | 2.7                     | 4.1                    | 7.8                   | 4.9                  | 11.5                    |
| Zambia      | 2013-14 DHS   | 10.5                   | 13.3                  | 9                    | 7.3                     | 9.7                    | 9.6                   | 12.1                 | 16.5                    |
| Zimbabwe    | 2015 DHS      | 8.1                    | 13.5                  | 6                    | 2.5                     | 5.5                    | 8.2                   | 10.2                 | 18.5                    |
| Zimbabwe    | 2010-11 DHS   | 10.9                   | 17.7                  | 8.2                  | 6.4                     | 6.5                    | 11.2                  | 14.2                 | 19.1                    |