# Supplemental Information (SI)



SI Figure 1: Per cent contribution of different LDF types to country LDF nutrient supplies in 2010

SI Table 1: Assumptions on income and population in 2050 for the IMPACT scenarios used

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenario\* | Burkina Faso | Ethiopia | India | Kenya | Nicaragua | Tanzania | Uganda | Vietnam |
|  | GDP in Billion US Dollars | | | | | | | |
| High | 312.92 | 1,406.96 | 36,896.75 | 755.23 | 109.54 | 975.60 | 776.07 | 2,091.51 |
| Moderate | 221.00 | 895.67 | 27,538.48 | 509.87 | 85.86 | 702.11 | 555.22 | 1,602.44 |
| Low | 143.99 | 563.45 | 18,892.21 | 365.34 | 69.85 | 494.78 | 379.80 | 1,255.85 |
|  |  |  |  |  |  |  |  |  |
|  | Population in Million heads | | | | | | | |
| High | 32.53 | 139.51 | 1,550.40 | 70.35 | 6.15 | 85.02 | 76.37 | 98.22 |
| Moderate | 38.60 | 158.83 | 1,733.80 | 78.06 | 7.01 | 102.25 | 93.25 | 104.38 |
| Low | 47.05 | 184.87 | 1,970.55 | 95.95 | 9.28 | 120.72 | 113.30 | 112.60 |
|  |  |  |  |  |  |  |  |  |
|  | GDP per capita in US dollars | | | | | | | |
| High | 9,619.99 | 10,085.21 | 23,798.25 | 10,735.65 | 17,820.66 | 11,474.96 | 10,161.86 | 21,293.17 |
| Moderate | 5,725.09 | 5,639.22 | 15,883.35 | 6,532.15 | 12,242.24 | 6,866.37 | 5,953.89 | 15,352.55 |
| Low | 3,060.07 | 3,047.80 | 9,587.28 | 3,807.73 | 7,529.08 | 4,098.46 | 3,352.08 | 11,153.29 |

\*High: SSP1; Moderate: SSP2; Low: SSP3, all with no climate change effects. Assumptions on income and population are the same for the ‘moderate plus climate change’ scenario as for the ‘moderate’ scenario so that Moderate + CC = Moderate, with respect to socio-economic variables. Effects however differ on the supply side (not shown), where climate change imposes environmental stresses and thus productivity losses, on crop production.

SI Table 2: Nutrient equivalents per 100 g of selected foods of animal and plant origins

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **FAO/IMPACT model commodity** | **USDA food classification** | Energy | Protein | Carbo- hydrate | Total sugar | Total Fat (lipid) | Iron | sodium | vitamin A RAE | folate | vitamin D (D2+D3) | |  |  | Kcal | g | G | g | g | mg | mg | mug | mug | mug | | Beef | Beef, carcass, separable lean and fat, choice, raw | 291 | 17.32 | 0 | 0 | 24.05 | 1.83 | 59 | 0 | 7 | 0 | | Eggs | Egg, whole, raw, fresh | 143 | 12.56 | 0.72 | 0.37 | 9.51 | 1.75 | 142 | 160 | 47 | 2 | | Milk | Milk, whole, 3.25% milkfat, without added vitamin a and vitamin d | 149 | 3.15 | 4.78 | 5.05 | 3.27 | 0.03 | 43 | 46 | 5 | 0.1 | |  | Lamb, ground, raw | 282 | 16.56 | 0 | 0 | 23.41 | 1.55 | 59 | 0 | 18 | 0.1 | |  | Goat, raw | 109 | 20.6 | 0 | 0 | 2.31 | 2.83 | 82 | 0 | 5 | 0 | | Lamb | Average Lamb and Goat | 195.5 | 18.58 | 0 | 0 | 12.86 | 2.19 | 70.5 | 0 | 11.5 | 0.05 | | Pork | Pork, fresh, carcass, separable lean and fat, raw | 376 | 13.91 | 0 | 0 | 35.07 | 0.69 | 42 | 2 | 4 | 0 | | Poultry | Chicken, broilers or fryers, meat only, raw | 119 | 21.39 | 0 | 0 | 3.08 | 0.89 | 77 | 16 | 7 | 0.1 | | Barley | Barley, hulled | 354 | 12.48 | 73.48 | 0.8 | 2.3 | 3.6 | 12 | 1 | 19 | 0 | |  | Corn grain, white | 365 | 9.42 | 74.26 |  | 4.74 | 2.71 | 35 | 0 |  | 0 | |  | Corn grain, yellow | 365 | 9.42 | 74.26 | 0.64 | 4.74 | 2.71 | 35 | 11 | 19 | 0 | | Maize | Average of White and Yellow Corn | 365 | 9.42 | 74.26 | 0.64 | 4.74 | 2.71 | 35 | 5.5 | 19 | 0 | | Millet | Millet, raw | 378 | 11.02 | 72.85 |  | 4.22 | 3.01 | 5 | 0 | 85 | 0 | |  | Rice, white, short-grain, raw, unenriched | 358 | 6.5 | 79.15 |  | 0.52 | 0.8 | 1 |  | 6 | 0 | |  | Rice, brown, long-grain, raw | 367 | 7.54 | 76.25 | 0.66 | 3.2 | 1.29 | 5 | 0 | 23 | 0 | | Rice | Average Brown and White rice | 362.5 | 7.02 | 77.7 | 0.66 | 1.86 | 1.045 | 3 | 0 | 14.5 | 0 | | Sorghum | Sorghum grain | 329 | 10.62 | 72.09 | 2.53 | 3.46 | 3.36 | 2 | 0 | 20 | 0 | | Wheat | Wheat, durum | 339 | 13.68 | 71.13 |  | 2.47 | 3.52 | 2 | 0 | 43 | 0 | | Other Cereals | triticale | 336 | 13.05 | 72.13 |  | 2.09 | 2.57 | 5 | 0 | 73 | 0 | | Cassava | cassava, raw | 160 | 1.36 | 38.06 | 2.7 | 0.28 | 0.27 | 14 | 1 | 27 | 0 | | Potato | Potatoes, flesh and skin, raw | 77 | 2.05 | 17.49 | 0.82 | 0.09 | 0.81 | 6 | 0 | 15 | 0 | |  |  |  |  |  |  |  |  |  |  |  |  | | **FAO/IMPACT model commodity** | **USDA food classification** | Energy | Protein | Carbo- hydrate | Total sugar | Total Fat (lipid) | Iron | sodium | vitamin A RAE | folate | vitamin D (D2+D3) | |  |  | Kcal | g | g | g | g | mg | mg | mug | mug | mug | | Sweet Potato | Sweet potato, raw, unprepared | 86 | 1.57 | 20.12 | 4.18 | 0.05 | 0.61 | 55 | 709 | 11 | 0 | | Yams | Yam, raw | 118 | 1.53 | 27.88 | 0.5 | 0.17 | 0.54 | 9 | 7 | 23 | 0 | | Other Roots & Tubers | Taro, raw | 112 | 1.5 | 26.46 | 0.4 | 0.2 | 0.55 | 11 | 4 | 22 | 0 | | Beans | Beans, kidney, all types, mature seeds, raw | 333 | 23.58 | 60.01 | 2.23 | 0.83 | 8.2 | 24 | 0 | 394 | 0 | | Chickpea | Chickpeas, mature seeds, raw | 378 | 20.47 | 62.95 | 10.7 | 6.04 | 4.31 | 24 | 3 | 557 | 0 | | Cowpea | Cowpeas, common, mature seeds, raw | 336 | 23.52 | 60.03 | 6.9 | 1.26 | 8.27 | 16 | 3 | 633 | 0 | | Lentils | Lentils, raw | 352 | 24.63 | 63.35 | 2.03 | 1.06 | 6.51 | 6 | 2 | 479 | 0 | | Pigeon Peas | Pigeon peas (red gram), mature seeds, raw | 343 | 21.7 | 62.78 |  | 1.49 | 5.23 | 17 | 1 | 456 | 0 | | Other Pulses | Peas, green, split, mature seeds, raw | 352 | 23.82 | 63.74 | 8 | 1.16 | 4.82 | 15 | 7 | 274 | 0 | | Banana | Bananas, raw | 89 | 1.09 | 22.84 | 27.52 | 0.33 | 0.26 | 1 | 3 | 20 | 0 | | Plantains | Plantains, raw | 122 | 1.3 | 31.89 | 15 | 0.37 | 0.6 | 4 | 56 | 22 | 0 | | Sub-tropical Fruits | Oranges, raw, all commercial varieties | 47 | 0.9 | 11.75 | 9.35 | 0.12 | 0.1 | 0 | 11 | 30 | 0 | | Temperate Fruits | Apples, raw, with skin | 52 | 0.26 | 13.81 | 10.39 | 0.17 | 0.12 | 1 | 3 | 3 | 0 | | Vegetables | Spinach, raw | 23 | 2.86 | 3.63 | 0.42 | 0.39 | 2.71 | 79 | 469 | 194 | 0 | | Sugar | Sugars, brown | 380 | 0.12 | 98.09 | 97.02 | 0 | 0.71 | 28 | 0 | 1 | 0 | | Groundnuts | Peanuts, all types, raw | 567 | 25.8 | 16.13 | 4.72 | 49.24 | 4.58 | 18 | 0 | 240 | 0 | | Groundnut Oil | Oil, peanut, salad or cooking | 884 |  |  |  | 100 | 0.03 | 0 | 0 | 0 | 0 | | Rapeseed | Seeds, lotus seeds, raw | 89 | 4.13 | 17.28 |  | 0.53 | 0.95 | 1 | 1 | 28 | 0 | | Rapeseed Oil | Oil, canola | 884 |  |  |  | 100 | 0 | 0 | 0 | 0 | 0 | | Soybeans | Soybeans, mature seeds, raw | 446 | 36.49 | 30.16 | 7.33 | 19.94 | 15.7 | 2 | 1 | 375 | 0 | | Soybean Oil | Oil, soybean, salad or cooking | 884 |  |  |  | 100 | 0.05 | 0 | 0 | 0 | 0 | | Sun flower Oil | Oil, sunflower, linoleic, (approx 65%) | 884 |  |  |  | 100 | 0 | 0 | 0 | 0 | 0 | | Palm Oil | Oil, palm | 884 | 0 | 0 | 0 | 100 | 0.01 | 0 | 0 | 0 |  | | **FAO/IMPACT model commodity** | **USDA food classification** | Energy | Protein | Carbo- hydrate | Total sugar | Total Fat (lipid) | Iron | sodium | vitamin A RAE | folate | vitamin D (D2+D3) | |  |  | Kcal | g | G | g | g | mg | mg | mug | mug | mug | | Palm Kernel Oil | Vegetable oil, palm kernel | 862 |  |  |  | 100 | 0 | 0 | 0 | 0 | 0 | | Other Oilseeds | seeds, flaxseed | 534 | 18.29 | 28.88 | 1.55 | 42.16 | 0.59 | 30 | 0 | 87 | 0 | | Other Oils | Oil, coconut | 892 |  |  |  | 99.06 | 0.05 | 0 | 0 | 0 | 0 | | Cocoa | Cocoa, dry powder, unsweetened | 228 | 19.6 | 57.9 | 1.75 | 13.7 | 13.86 | 21 | 0 | 32 | 0 | | Coffee | Beverages, coffee, instant, regular, powder | 353 | 12.2 | 75.4 | 0 | 0.5 | 4.41 | 37 | 0 | 0 | 0 | | Tea | Beverages, tea, instant, unsweetened, powder | 315 | 20.21 | 58.66 | 5.53 | 0 | 2.26 | 72 | 0 | 103 | 0 | | Other Crops | Spices, curry powder | 325 | 14.29 | 55.83 | 2.76 | 14.01 | 19.1 | 52 | 1 | 56 | 0 | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Source: Data retrieved from USDA's national nutrient data base <https://ndb.nal.usda.gov/>, accessed 02 June 2016. Authors’  associations of USDA food categories to FAO/IMPACT model commodities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

SI Table 3: Calories and nutrient values of per capita food supplies in the eight countries in 2010, the base year

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Supply per capita per day in 2010 (% from LDF in brackets) | | | | | | | |
| Country | Energy | Macro Nutrients | | | Micro Nutrients | | | |
|  | Calories (kcal/d) | Protein (g/d) | Carbs (g/d) | Fats  (total fat) (g/d) | Iron (mg/d) | Folate (µg/d) | Vitamin (A1 µg/d) | Vitamin D µg/d | |
| RDA2 | 2,2503 | 50 | 130 | 723 | 13 | 400 | 800 | 5 | |
| Burkina Faso | 2,947 | 94 | 509 | 67 | 27 | 704 | 503 | 0.19 | |
|  | (6.6) | (10.7) | (0.4) | (16.6) | (3.1) | (1.2) | (6.6) | (100.0) | |
| Ethiopia | 1,774 | 62 | 336 | 25 | 16 | 374 | 364 | 0.08 | |
|  | (7.5) | (8.9) | (0.7) | (23.4) | (2.6) | (1.3) | (7.3) | (100.0) | |
| India | 2,412 | 63 | 412 | 45 | 18 | 607 | 1,038 | 0.33 | |
|  | (13.9) | (15.1) | (2.3) | (20.4) | (2.0) | (2.3) | (9.9) | (100.0) | |
| Kenya | 2,411 | 65 | 396 | 50 | 18 | 552 | 998 | 0.31 | |
|  | (18.3) | (22.2) | (2.7) | (32.1) | (4.7) | (2.9) | (10.9) | (100.0) | |
| Nicaragua | 2,579 | 68 | 429 | 51 | 15 | 367 | 244 | 0.44 | |
|  | (16.4) | (26.2) | (2.4) | (26.2) | (5.2) | (5.0) | (48.5) | (100.0) | |
| Tanzania | 2,735 | 68 | 492 | 54 | 18 | 646 | 1,176 | 0.16 | |
|  | (8.5) | (12.9) | (1.0) | (17.4) | (3.1) | (1.3) | (4.4) | (100.0) | |
| Uganda | 2,704 | 61 | 509 | 49 | 18 | 661 | 2,206 | 0.14 | |
|  | (8.8) | (14.3) | (0.9) | (21.3) | (2.7) | (1.2) | (2.2) | (100.0) | |
| Vietnam | 2,608 | 71 | 451 | 58 | 19 | 668 | 1,256 | 0.18 | |
|  | (15.6) | (25.9) | (0.3) | (56.2) | (5.3) | (1.5) | (2.4) | (100.0) | |

1Values for vitamin A are of Retinol Activity Equivalent (RAE)

2Recommended dietary allowance (RDA) is the average amount sufficient to meet the nutrient requirement of about 98 per cent of healthy males and non-pregnant females in the 19-to-50 year-old cohorts (NAS, 2006). Not determined for fat intake due to insufficient data.

3Comparable values for calorie and fat intake calculated using(USDA & USDHS, 2010).

SI Table 4: Contribution of different food groups to per capita calorie supplies, by country in 2050\*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Livestock-Derived Foods | Cereals & Grains | Pulses & Legumes | Roots & Tubers | Fruits & Vegetables | Oils &  Oilseeds | Other Crops |
| Burkina | 507 | 2329 | 337 | 21 | 57 | 197 | 98 |
|  | 162.4 | 5.8 | 13.5 | 2.9 | 114.2 | 37.8 | 49.0 |
|  |  |  |  |  |  |  |  |
| Ethiopia | 165.6 | 1564.6 | 227.7 | 32.0 | 66.0 | 68.0 | 116.2 |
|  | 25.1 | 18.9 | 65.4 | (1.5) | 106.3 | 42.2 | 53.5 |
|  |  |  |  |  |  |  |  |
| India | 472.0 | 1403.0 | 71.3 | 97.3 | 292.5 | 272.3 | 369.9 |
|  | 40.5 | 1.5 | 27.9 | 32.2 | 139.4 | 28.4 | 60.2 |
|  |  |  |  |  |  |  |  |
| Kenya | 501.6 | 1729.1 | 157.9 | 161.0 | 287.5 | 343.9 | 255.6 |
|  | 13.7 | 45.5 | 31.6 | 12.0 | 86.6 | 105.8 | 30.4 |
|  |  |  |  |  |  |  |  |
| Nicaragua | 506.2 | 1415.8 | 236.6 | 38.2 | 82.2 | 338.5 | 528.5 |
|  | 19.8 | 7.2 | 33.5 | (6.5) | 45.5 | 63.6 | 49.3 |
|  |  |  |  |  |  |  |  |
| Tanzania | 385.0 | 1178.8 | 299.4 | 635.5 | 391.0 | 456.5 | 131.9 |
|  | 66.2 | 10.6 | 26.9 | (0.1) | 88.4 | 77.9 | 30.5 |
|  |  |  |  |  |  |  |  |
| Uganda | 387.5 | 741.1 | 261.4 | 641.4 | 773.2 | 388.8 | 145.4 |
|  | 63.4 | 10.8 | 25.2 | (2.7) | 32.5 | 68.2 | 26.6 |
|  |  |  |  |  |  |  |  |
| Vietnam | 636.3 | 1563.2 | 105.6 | 52.9 | 222.7 | 88.6 | 336.3 |
|  | 56.8 | (3.5) | 21.3 | 5.8 | 40.4 | 8.8 | 63.9 |
|  |  |  |  |  |  |  |  |
| Mean | 445.1 | 1490.6 | 212.1 | 209.9 | 271.6 | 269.2 | 247.8 |
|  | 48.4 | 10.8 | 28.6 | 1.4 | 62.0 | 60.0 | 47.5 |

\* Showing results for the moderate economic growth scenario.

Values on lower rows are percent change from 2010 (negative values in parenthesis)

SI Table 5: Contribution of different livestock product types\* to per capita nutrient supplies, by country in 2010

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Country | Item | Protein (g/d) | Carbohy-drates (g/d) | Fats (g/d) | Iron | Sodium | Vitamin A | Folate | Vitamin D |
| Burkina Faso | Eggs | 0.82 | 0.05 | 0.62 | 0.11 | 9.31 | 10.48 | 3.08 | 0.13 |
| Milk | 1.46 | 2.22 | 1.52 | 0.01 | 19.97 | 21.36 | 2.32 | 0.05 |
| Chicken Meat | 1.39 |  | 0.20 | 0.06 | 5.00 | 1.04 | 0.45 | 0.01 |
| Pig Meat | 0.95 |  | 2.40 | 0.05 | 2.87 | 0.14 | 0.27 |  |
| Beef or lambBeef or lamb | 5.43 |  | 6.42 | 0.59 | 19.13 |  | 2.54 | 0.00 |
| CDF | 84.11 | 506.69 | 56.13 | 25.69 | 147.70 | 469.56 | 695.78 |  |
| Ethiopia | Eggs | 0.16 | 0.01 | 0.12 | 0.02 | 1.81 | 2.04 | 0.60 | 0.03 |
| Milk | 1.65 | 2.51 | 1.71 | 0.02 | 22.54 | 24.11 | 2.62 | 0.05 |
| Chicken Meat | 0.42 |  | 0.06 | 0.02 | 1.53 | 0.32 | 0.14 | 0.00 |
| Pig Meat | 0.01 |  | 0.03 | 0.00 | 0.03 | 0.00 | 0.00 |  |
| Beef or lambBeef or lamb | 3.29 |  | 3.96 | 0.36 | 11.54 |  | 1.52 | 0.00 |
| CDF | 56.55 | 333.67 | 19.24 | 15.81 | 107.92 | 337.67 | 369.25 |  |
| India | Eggs | 0.79 | 0.05 | 0.60 | 0.11 | 8.90 | 10.03 | 2.95 | 0.13 |
| Milk | 6.31 | 9.57 | 6.55 | 0.06 | 86.07 | 92.08 | 10.01 | 0.20 |
| Chicken Meat | 0.99 |  | 0.14 | 0.04 | 3.56 | 0.74 | 0.32 | 0.00 |
| Pig Meat | 0.15 |  | 0.38 | 0.01 | 0.45 | 0.02 | 0.04 |  |
| Beef or lambBeef or lamb | 1.28 |  | 1.51 | 0.14 | 4.51 |  | 0.60 | 0.00 |
| CDF | 53.45 | 401.97 | 35.82 | 17.83 | 198.77 | 935.58 | 593.16 |  |
| Kenya | Eggs | 0.51 | 0.03 | 0.38 | 0.07 | 5.72 | 6.44 | 1.89 | 0.08 |
| Milk | 6.96 | 10.55 | 7.22 | 0.07 | 94.94 | 101.57 | 11.04 | 0.22 |
| Chicken Meat | 0.35 |  | 0.05 | 0.01 | 1.26 | 0.26 | 0.11 | 0.00 |
| Pig Meat | 0.15 |  | 0.37 | 0.01 | 0.44 | 0.02 | 0.04 |  |
| Beef or lambBeef or lamb | 6.38 |  | 8.11 | 0.69 | 22.16 |  | 2.81 | 0.00 |
| CDF | 50.36 | 385.74 | 34.14 | 17.28 | 236.71 | 889.57 | 536.07 |  |
| SI Table 5 continued. | | | | | | | | | |
| Country | Item | Protein (g/d) | Carbohy-drates (g/d) | Fats (g/d) | Iron | Sodium | Vitamin A | Folate | Vitamin D |
| Nicaragua | Eggs | 1.20 | 0.07 | 0.91 | 0.17 | 13.61 | 15.34 | 4.51 | 0.19 |
| Milk | 6.69 | 10.15 | 6.94 | 0.06 | 91.31 | 97.68 | 10.62 | 0.21 |
| Chicken Meat | 7.04 |  | 1.01 | 0.29 | 25.34 | 5.27 | 2.30 | 0.03 |
| Pig Meat | 0.56 |  | 1.41 | 0.03 | 1.69 | 0.08 | 0.16 |  |
| Beef or lambBeef or lamb | 2.27 |  | 3.15 | 0.24 | 7.73 |  | 0.92 | 0.00 |
| CDF | 50.07 | 419.21 | 37.76 | 14.31 | 123.13 | 125.72 | 348.51 |  |
| Tanzania | Eggs | 0.30 | 0.02 | 0.23 | 0.04 | 3.45 | 3.88 | 1.14 | 0.05 |
| Milk | 3.25 | 4.93 | 3.37 | 0.03 | 44.34 | 47.43 | 5.16 | 0.10 |
| Chicken Meat | 0.92 |  | 0.13 | 0.04 | 3.29 | 0.68 | 0.30 | 0.00 |
| Pig Meat | 0.15 |  | 0.39 | 0.01 | 0.46 | 0.02 | 0.04 |  |
| Beef or lamb | 4.10 |  | 5.29 | 0.44 | 14.20 |  | 1.78 | 0.00 |
| CDF | 58.81 | 487.00 | 44.75 | 17.51 | 259.16 | 1123.88 | 637.24 |  |
| Uganda | Eggs | 0.22 | 0.01 | 0.17 | 0.03 | 2.47 | 2.78 | 0.82 | 0.03 |
| Milk | 3.11 | 4.72 | 3.23 | 0.03 | 42.48 | 45.44 | 4.94 | 0.10 |
| Chicken Meat | 1.11 |  | 0.16 | 0.05 | 3.99 | 0.83 | 0.36 | 0.01 |
| Pig Meat | 1.42 |  | 3.58 | 0.07 | 4.28 | 0.20 | 0.41 |  |
| Beef or lamb | 2.82 |  | 3.42 | 0.31 | 9.89 |  | 1.29 | 0.00 |
| CDF | 52.13 | 504.73 | 38.91 | 17.33 | 290.60 | 2156.41 | 653.17 |  |
| Vietnam | Eggs | 0.85 | 0.05 | 0.64 | 0.12 | 9.56 | 10.77 | 3.16 | 0.13 |
| Milk | 0.99 | 1.51 | 1.03 | 0.01 | 13.54 | 14.49 | 1.57 | 0.03 |
| Chicken Meat | 3.66 |  | 0.53 | 0.15 | 13.18 | 2.74 | 1.20 | 0.02 |
| Pig Meat | 11.18 |  | 28.20 | 0.55 | 33.77 | 1.61 | 3.22 |  |
| Beef or lamb | 1.61 |  | 2.18 | 0.17 | 5.49 |  | 0.66 | 0.00 |
| CDF | 52.31 | 449.89 | 25.40 | 18.08 | 245.12 | 1226.67 | 658.18 |  |

\*Total daily supply from crop-derived foods (CDF) included for comparison

Source: author’s calculations using model outputs corresponding to the reference scenario, and nutrient conversion rates (SI Table 2).

SI Table 6: Scenario projections on total household demand and net trade of livestock-derived foods, by country

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scenarios | Food Groups\* | Burkina | Ethiopia | India | Kenya | Nicaragua | Tanzania | Uganda | Vietnam |
| High Growth | Eggs1 | 206 | 159 | 8,678 | 247 | 29 | 172 | 109 | 608 |
| Eggs2 | (212) | (132) | (2,505) | (218) | 13 | (143) | (116) | (235) |
| Milk1 | 1,211 | 3,347 | 155,316 | 5,415 | 503 | 5,345 | 4,202 | 1,891 |
| Milk2 | (641) | 910 | 70,776 | 639 | 262 | (2,374) | (2,170) | (1,414) |
| Poultry meat1 | 405 | 293 | 26,382 | 221 | 155 | 557 | 563 | 1,500 |
| Poultry meat2 | (259) | (89) | (17,256) | (133) | 85 | (290) | (329) | (99) |
| Pig meat1 | 286 | 16 | 911 | 87 | 14 | 108 | 633 | 4,711 |
| Pig meat2 | 3 | (5) | 1,575 | (57) | 12 | (79) | (328) | 102 |
| Beef or lamb1 | 1,669 | 1,405 | 7,918 | 1,678 | 52 | 1,710 | 1,254 | 636 |
| Beef or lamb2 | (1,086) | 458 | 1,499 | (248) | 154 | (395) | (735) | (91) |
| Moderate Growth | Eggs1 | 195 | 147 | 8,112 | 222 | 31 | 172 | 110 | 561 |
| Eggs2 | (197) | (119) | (1,769) | (188) | 9 | (144) | (118) | (192) |
| Milk1 | 1,180 | 3,581 | 161,329 | 6,037 | 568 | 5,669 | 4,583 | 1,842 |
| Milk2 | (621) | 588 | 63,852 | (34) | 178 | (2,727) | (2,600) | (1,367) |
| Poultry meat1 | 330 | 264 | 19,339 | 166 | 160 | 495 | 506 | 1,383 |
| Poultry meat2 | (194) | (74) | (10,977) | (83) | 65 | (245) | (287) | (87) |
| Pig meat1 | 248 | 13 | 940 | 72 | 15 | 99 | 631 | 4,601 |
| Pig meat2 | 33 | (3) | 1,491 | (42) | 11 | (70) | (329) | 13 |
| Beef or lamb1 | 1,382 | 1,451 | 7,896 | 1,636 | 54 | 1,716 | 1,209 | 611 |
| Beef or lamb2 | (819) | 350 | 1,248 | (259) | 140 | (452) | (709) | (80) |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| SI Table 6 continued. | | | | | | | | | |
| Scenarios | Food Groups\* | Burkina | Ethiopia | India | Kenya | Nicaragua | Tanzania | Uganda | Vietnam |
| Low Growth | Eggs1 | 182 | 138 | 7,400 | 219 | 39 | 171 | 110 | 532 |
| Eggs2 | (182) | (110) | (957) | (187) | (1) | (144) | (118) | (177) |
| Milk1 | 1,144 | 3,946 | 168,469 | 7,532 | 744 | 5,959 | 4,978 | 1,844 |
| Milk2 | (611) | 34 | 52,114 | (1,763) | (62) | (3,069) | (3,083) | (1,373) |
| Poultry meat1 | 257 | 244 | 13,012 | 136 | 186 | 439 | 448 | 1,307 |
| Poultry meat2 | (134) | (71) | (5,560) | (60) | 23 | (211) | (247) | (138) |
| Pig meat1 | 211 | 11 | 983 | 65 | 18 | 91 | 627 | 4,612 |
| Pig meat2 | 58 | (1) | 1,350 | (36) | 6 | (62) | (331) | (335) |
| Beef or lamb1 | 1,108 | 1,551 | 7,833 | 1,769 | 63 | 1,717 | 1,154 | 601 |
| Beef or lamb2 | (571) | 167 | 984 | (469) | 114 | (524) | (680) | (90) |
| Climate Change | Eggs1 | 192 | 145 | 8,075 | 220 | 31 | 171 | 109 | 554 |
| Eggs2 | (193) | (118) | (1,648) | (187) | 9 | (143) | (117) | (186) |
| Milk1 | 1,173 | 3,560 | 160,743 | 6,010 | 568 | 5,643 | 4,563 | 1,835 |
| Milk2 | (602) | 591 | 62,531 | (26) | 173 | (2,740) | (2,589) | (1,369) |
| Poultry meat1 | 324 | 259 | 19,055 | 163 | 157 | 485 | 496 | 1,376 |
| Poultry meat2 | (184) | (69) | (10,617) | (80) | 68 | (236) | (278) | (62) |
| Pig meat1 | 244 | 13 | 923 | 70 | 15 | 98 | 621 | 4,577 |
| Pig meat2 | 42 | (2) | 1,493 | (41) | 11 | (68) | (320) | 76 |
| Beef or lamb1 | 1,369 | 1,442 | 7,831 | 1,621 | 54 | 1,700 | 1,199 | 610 |
| Beef or lamb2 | (800) | 365 | 1,201 | (238) | 145 | (431) | (696) | (84) |

\*1Total demand by households; 2net trade, parenthesis indicating net import situation