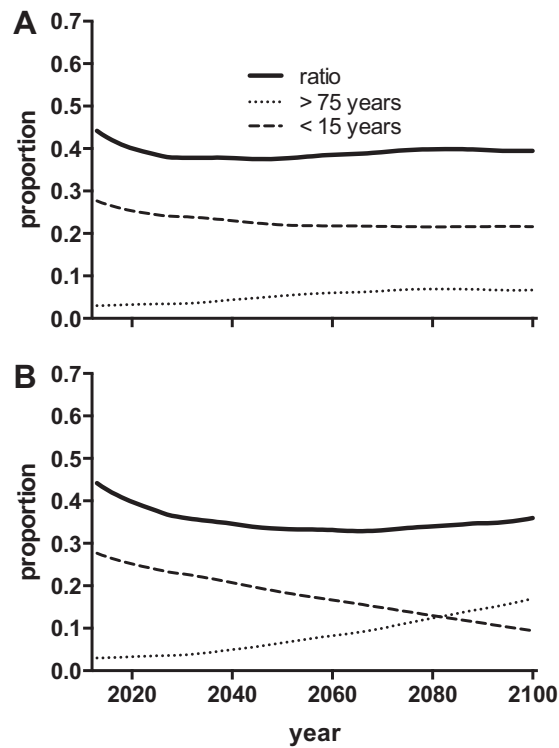


# Supporting Information

Bradshaw and Brook 10.1073/pnas.1410465111



**Fig. S1.** Testing sensitivity of scenario assumptions: Proportion of people <15 y or >75 y per time step, and their ratio to the remainder of the population (dependency ratio) for (A) Scenario 1 (BAU), and (B) Scenario 3 (decreasing mortality, increasing age at primiparity, decreasing fertility to one child per female). See main text for detailed scenario descriptions.



**Table S2. BAU population growth and its implications for Biodiversity Hotspots**

Subregion	$N_{2013}$ (millions)	$N_{2100}/N_{2013}$	$\bar{D}_{2100}$ (ppl km <sup>-2</sup> )	Biodiversity Hotspots
1-Africa D	425	7.02	246.4	Guinean Forests of West Africa Mediterranean Basin
2-Africa E	491	5.64	241.3	Cape Floristic Region Succulent Karoo Maputaland-Pondoland-Albany Madagascar & Indian Ocean Islands Coastal Forests of Eastern Africa Eastern Afromontane Horn of Africa
7-Eastern Mediterranean D	432	3.51	215.4	Guinean Forests of West Africa Eastern Afromontane Horn of Africa Mediterranean Basin Irano-Anatolian
5-Americas D	87	2.29	67.7	Tropical Andes Tumbes-Choco-Magdalena Caribbean Islands Mesoamerica
12-Southeast Asia D	1405	2.06	656.6	Himalaya Indo-Burma Western Ghats and Sri Lanka
6-Eastern Mediterranean B	158	1.75	44.7	Eastern Afromontane Horn of Africa Mediterranean Basin Irano-Anatolian
4-Americas B	518	1.50	44.8	Chilean Winter Rainfall and Valdivian Forests Atlantic Forest Cerrado Tropical Andes Tumbes-Choco-Magdalena Caribbean Islands Mesoamerica California Floristic Province Madrean Pine-Oak Woodlands
11-Southeast Asia B	346	1.29	177.1	Indo-Burma Sundaland Wallacea
3-Americas A	373	1.06	20.0	Caribbean Islands California Floristic Province
9-Europe B	241	0.98	75.1	Mediterranean Basin Irano-Anatolian Caucasus Mountains of Central Asia
14-Western Pacific B	1571	0.90	107.5	Mountains of Central Asia Himalaya Mountains of Southwest China Indo-Burma Sundaland Philippines East Melanesian Islands Polynesia-Micronesia
8-Europe A	460	0.70	82.7	Mediterranean Basin
10-Europe C	270	0.54	7.0	Caucasus Mountains of Central Asia
13-Western Pacific A	166	0.52	10.4	Southwest Australia Forests of East Australia New Caledonia New Zealand Japan

Current human population size and structure ( $N_{2013}$ ), ratio of population change based on our midrange BAU demographic projections ( $N_{2100}/N_{2013}$ ), mean population density (people km<sup>-2</sup>) in 2100 across all countries per region ( $\bar{D}_{2100}$ ) and the Biodiversity Hotspots contained within each of 14 WHO-defined population subregions. Regions are ordered (descending) by  $N_{2100}/N_{2013}$ . Subregion country composition (see legend to Fig. 4 for country code expansion): Africa D (Region 1: AGO, BEN, BFA, CMR, CPV, DZA, GAB, GHA, GIN, GMB, GNB, GNQ, LBR, MDG, MLI, MRT, MUS, NER, NGA, SEN, SLE, STP, SYC, TCD, TGO), Africa E (Region 2: BDI, BWA, CAF, CIV, COD, COG, ERI, ETH, KEN, LSO, MOZ, MWI, NAM, RWA, SWZ, TZA, UGA, ZAF, ZMB, ZWE), Americas A (Region 3: CAN, CUB, USA), Americas B (Region 4: ARG, ATG, BHS, BLZ, BRA, BRB, CHL, COL, CRI, DMA, DOM, GRD, GUY, HND, JAM, KNA, LCA, MEX, PAN, PRY, SLV, SUR, TTO, URY, VCT, VEN), Americas D (Region 5: BOL, ECU, GTM, HTI, NIC, PER), Eastern Mediterranean B (Region 6: ARE, BHR, CYP, IRN, JOR, KWT, LBN, LBY, OMN, QAT, SAU, SYR, TUN), Eastern Mediterranean D (Region 7: AFG, DJI, EGY, IRQ, MAR, PAK, SOM, SDN, YEM), Europe A (Region 8: AND, AUT, BEL, CHE, CZE, DEU, DNK, ESP, FIN, FRA, GBR, GRC, HRV, IRL, ISL, ISR, ITA, LUX, MCO, MLT, NLD, NOR, PRT, SMR, SVN, SWE), Europe B (Region 9: ALB, ARM, AZE, BGR, BIH, GEO, KGZ, MKD, MNE, POL, ROU, SRB, SVK, TJK, TKM, TUR, UZB), Europe C (Region 10: BLR, EST, HUN, KAZ, LTU, LVA, MDA, RUS, U.K.R), Southeast Asia B (Region 11: IDN, LKA, THA, TLS), Southeast Asia D (Region 12: BGD, BTN, IND, MDV, MMR, NPL, PRK), Western Pacific A (Region 13: AUS, BRN, JPN, NZL, SGP), Western Pacific B (Region 14: CHN, COK, FJI, FSM, KHM, KIR, KOR, LAO, MHL, MNG, MYS, NIU, NRU, PHL, PLW, PNG, SLB, TON, TUV, VNM, VUT, WSM).

**Table S3. Effects of declining fertility and mortality by region**

Subregion	$N_{2013}$ (millions)	$N_{2100}/N_{2013}$	$\bar{D}_{2100}$ (ppl km <sup>-2</sup> )
1-Africa D	425	4.45	156.1
2-Africa E	491	3.61	154.7
7-Eastern Mediterranean D	432	2.31	141.8
5-Americas D	87	1.56	46.1
12-Southeast Asia D	1405	1.41	448.5
6-Eastern Mediterranean B	158	1.24	31.7
4-Americas B	518	1.08	32.2
11-Southeast Asia B	346	0.96	132.1
3-Americas A	373	0.77	14.7
9-Europe B	241	0.74	56.4
14-Western Pacific B	1571	0.68	81.5
8-Europe A	460	0.54	64.3
13-Western Pacific A	166	0.44	8.7
10-Europe C	270	0.42	5.4

Shown are the current human population size and structure ( $N_{2013}$ ), ratio of population change based on our midrange demographic projections ( $N_{2100}/N_{2013}$ ), mean population density (people km<sup>-2</sup>) in 2100 across all countries per region ( $\bar{D}_{2100}$ ). This scenario assumes a linear trend to halving the initial (2013) fertilities and mortalities (juvenile and nonjuvenile), and increasing age at primiparity (following Scenario 2 conditions) by 2100. Regions are ordered (descending) by  $N_{2100}/N_{2013}$ . Subregion country composition (see Fig. 4 for expansion of country abbreviations): Africa D (Region 1: AGO, BEN, BFA, CMR, CPV, DZA, GAB, GHA, GIN, GMB, GNB, GNQ, LBR, MDG, MLI, MRT, MUS, NER, NGA, SEN, SLE, STP, SYC, TCD, TGO), Africa E (Region 2: BDI, BWA, CAF, CIV, COD, COG, ERI, ETH, KEN, LSO, MOZ, MWI, NAM, RWA, SWZ, TZA, UGA, ZAF, ZMB, ZWE), Americas A (Region 3: CAN, CUB, USA), Americas B (Region 4: ARG, ATG, BHS, BLZ, BRA, BRB, CHL, COL, CRI, DMA, DOM, GRD, GUY, HND, JAM, KNA, LCA, MEX, PAN, PRY, SLV, SUR, TTO, URY, VCT, VEN), Americas D (Region 5: BOL, ECU, GTM, HTI, NIC, PER), Eastern Mediterranean B (Region 6: ARE, BHR, CYP, IRN, JOR, KWT, LBN, LBY, OMN, QAT, SAU, SYR, TUN), Eastern Mediterranean D (Region 7: AFG, DJI, EGY, IRQ, MAR, PAK, SOM, SDN, YEM), Europe A (Region 8: AND, AUT, BEL, CHE, CZE, DEU, DNK, ESP, FIN, FRA, GBR, GRC, HRV, IRL, ISL, ISR, ITA, LUX, MCO, MLT, NLD, NOR, PRT, SMR, SVN, SWE), Europe B (Region 9: ALB, ARM, AZE, BGR, BIH, GEO, KGZ, MKD, MNE, POL, ROU, SRB, SVK, TJK, TKM, TUR, UZB), Europe C (Region 10: BLR, EST, HUN, KAZ, LTU, LVA, MDA, RUS, U.K.R), Southeast Asia B (Region 11: IDN, LKA, THA, TLS), Southeast Asia D (Region 12: BGD, BTN, IND, MDV, MMR, NPL, PRK), Western Pacific A (Region 13: AUS, BRN, JPN, NZL, SGP), Western Pacific B (Region 14: CHN, COK, FJI, FSM, KHM, KIR, KOR, LAO, MHL, MNG, MYS, NIU, NRU, PHL, PLW, PNG, SLB, TON, TUV, VNM, VUT, WSM).

## Other Supporting Information Files

[Dataset S1 \(PDF\)](#)

[Dataset S2 \(PDF\)](#)