# Anna B Harper

List of Publications by Year
in descending order



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|---|---|---|---|
| 60 papers | 3,413 citations | 186265 28 h-index | 149698 56 g-index |
| 97 all docs | 97 docs citations | 97 times ranked | 6361 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | UKESM1: Description and Evaluation of the U.K. Earth System Model. Journal of Advances in Modeling Earth Systems, 2019, 11, 4513-4558. | 3.8 | 448 |
| 2 | Spatiotemporal patterns of terrestrial gross primary production: A review. Reviews of Geophysics, 2015, 53, 785-818. | 23.0 | 432 |
| 3 | Global carbon budget 2013. Earth System Science Data, 2014, 6, 235-263. | 9.9 | 311 |
| 4 | Confronting model predictions of carbon fluxes with measurements of Amazon forests subjected to experimental drought. New Phytologist, 2013, 200, 350-365. | 7.3 | 247 |
| 5 | Land-use emissions play a critical role in land-based mitigation for Paris climate targets. Nature Communications, 2018, 9, 2938. | 12.8 | 194 |
| 6 | Improved representation of plant functional types and physiology in the Joint UK Land Environment Simulator (JULES v4.2) using plant trait information. Geoscientific Model Development, 2016, 9, 2415-2440. | 3.6 | 115 |
| 7 | Implications of improved representations of plant respiration in a changing climate. Nature Communications, 2017, 8, 1602. | 12.8 | 100 |
| 8 | Stomatal optimization based on xylem hydraulics (SOX) improves land surface model simulation of vegetation responses to climate. New Phytologist, 2020, 226, 1622-1637. | 7.3 | 95 |
| 9 | Carbon budgets for 1.5 and 2â€‰Â°C targets lowered by natural wetland and permafrost feedbacks. Nature Geoscience, 2018, 11, 568-573. | 12.9 | 74 |
| 10 | Decadal biomass increment in early secondary succession woody ecosystems is increased by CO2 enrichment. Nature Communications, 2019, 10, 454. | 12.8 | 68 |
| 11 | Large sensitivity in land carbon storage due to geographical and temporal variation in the thermal response of photosynthetic capacity. New Phytologist, 2018, 218, 1462-1477. | 7.3 | 67 |
| 12 | Increased importance of methane reduction for a 1.5 degree target. Environmental Research Letters, 2018, 13, 054003. | 5.2 | 61 |
| 13 | Land-use and land-cover change carbon emissions between 1901 and 2012 constrained by biomass observations. Biogeosciences, 2017, 14, 5053-5067. | 3.3 | 58 |
| 14 | Asymmetric responses of primary productivity to altered precipitation simulated by ecosystem models across three long-term grassland sites. Biogeosciences, 2018, 15, 3421-3437. | 3.3 | 55 |
| 15 | Rainfall manipulation experiments as simulated by terrestrial biosphere models: Where do we stand?. Global Change Biology, 2020, 26, 3336-3355. | 9.5 | 50 |
| 16 | Vegetation distribution and terrestrial carbon cycle in a carbon cycle configuration of JULES4.6 with new plant functional types. Geoscientific Model Development, 2018, 11, 2857-2873. | 3.6 | 49 |
| 17 | Impact of Evapotranspiration on Dry Season Climate in the Amazon Forest*. Journal of Climate, 2014, 27, 574-591. | 3.2 | 45 |
| 18 | Understanding the uncertainty in global forest carbon turnover. Biogeosciences, 2020, 17, 3961-3989. | 3.3 | 45 |

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|---|---|---|---|
| 19 | Gross primary production responses to warming, elevated <scp>CO</scp><sub>2</sub>, and irrigation: quantifying the drivers of ecosystem physiology in a semiarid grassland. Global Change Biology, 2017, 23, 3092-3106. | 9.5 | 43 |
| 20 | Challenging terrestrial biosphere models with data from the longâ€term multifactor Prairie Heating and <scp>CO</scp><sub>2</sub> Enrichment experiment. Global Change Biology, 2017, 23, 3623-3645. | 9.5 | 42 |
| 21 | Representation of fire, land-use change and vegetation dynamics in the Joint UK Land Environment Simulator vn4.9 (JULES). Geoscientific Model Development, 2019, 12, 179-193. | 3.6 | 41 |
| 22 | Multi vegetation model evaluation of the Green Sahara climate regime. Geophysical Research Letters, 2017, 44, 6804-6813. | 4.0 | 39 |
| 23 | The Montreal Protocol protects the terrestrial carbon sink. Nature, 2021, 596, 384-388. | 27.8 | 38 |
| 24 | INFERNO: a fire and emissions scheme for the UK Met Office's Unified Model. Geoscientific Model Development, 2016, 9, 2685-2700. | 3.6 | 37 |
| 25 | Conducting robust ecological analyses with climate data. Oikos, 2017, 126, 1533-1541. | 2.7 | 34 |
| 26 | Role of deep soil moisture in modulating climate in the Amazon rainforest. Geophysical Research Letters, 2010, 37, . | 4.0 | 33 |
| 27 | Plant Regrowth as a Driver of Recent Enhancement of Terrestrial CO<sub>2</sub> Uptake. Geophysical Research Letters, 2018, 45, 4820-4830. | 4.0 | 32 |
| 28 | JULES-CN: a coupled terrestrial carbonâ€“nitrogen scheme (JULES vn5.1). Geoscientific Model Development, 2021, 14, 2161-2186. | 3.6 | 32 |
| 29 | Modelling climate change responses in tropical forests: similar productivity estimates across five models, but different mechanisms and responses. Geoscientific Model Development, 2015, 8, 1097-1110. | 3.6 | 31 |
| 30 | Regional carbon fluxes from land use and land cover change in Asia, 1980â€“2009. Environmental Research Letters, 2016, 11, 074011. | 5.2 | 31 |
| 31 | Surface ecophysiological behavior across vegetation and moisture gradients in tropical South America. Agricultural and Forest Meteorology, 2013, 182-183, 177-188. | 4.8 | 29 |
| 32 | Influence of ENSO and the NAO on terrestrial carbon uptake in the Texasâ€northern Mexico region. Global Biogeochemical Cycles, 2015, 29, 1247-1265. | 4.9 | 29 |
| 33 | Land use change and El NiÃ±o-Southern Oscillation drive decadal carbon balance shifts in Southeast Asia. Nature Communications, 2018, 9, 1154. | 12.8 | 28 |
| 34 | Mapping the yields of lignocellulosic bioenergy crops from observations at the global scale. Earth System Science Data, 2020, 12, 789-804. | 9.9 | 26 |
| 35 | Shifts in national land use and food production in Great Britain after a climate tipping point. Nature Food, 2020, 1, 76-83. | 14.0 | 25 |
| 36 | The carbon cycle in Mexico: past, present and future of C stocks and fluxes. Biogeosciences, 2016, 13, 223-238. | 3.3 | 24 |

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| 37 | Evaluation of JULES-crop performance against site observations of irrigated maize from Mead, Nebraska. Geoscientific Model Development, 2017, 10, 1291-1320. | 3.6 | 24 |
| 38 | The impact of a simple representation of non-structural carbohydrates on the simulated response of tropical forests to drought. Biogeosciences, 2020, 17, 3589-3612. | 3.3 | 24 |
| 39 | Evaluating GPP and Respiration Estimates Over Northern Midlatitude Ecosystems Using Solarâ€Induced Fluorescence and Atmospheric CO<sub>2</sub> Measurements. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 2976-2997. | 3.0 | 21 |
| 40 | Representation of dissolved organic carbon in the JULES land surface model (vn4.4_JULES-DOCM). Geoscientific Model Development, 2018, 11, 593-609. | 3.6 | 21 |
| 41 | Recent progress in understanding climate thresholds. Progress in Physical Geography, 2018, 42, 24-60. | 3.2 | 18 |
| 42 | JULES-GL7: the Global Land configuration of the Joint UK Land Environment Simulator version 7.0 and 7.2. Geoscientific Model Development, 2020, 13, 483-505. | 3.6 | 17 |
| 43 | Large changes in Great Britainâ€™s vegetation and agricultural land-use predicted under unmitigated climate change. Environmental Research Letters, 2019, 14, 114012. | 5.2 | 15 |
| 44 | Improvement of modeling plant responses to low soil moisture in JULESvn4.9 and evaluation against flux tower measurements. Geoscientific Model Development, 2021, 14, 3269-3294. | 3.6 | 15 |
| 45 | Robust Ecosystem Demography (RED version 1.0): a parsimonious approach to modelling vegetation dynamics in Earth system models. Geoscientific Model Development, 2020, 13, 4067-4089. | 3.6 | 14 |
| 46 | On what scales can GOSAT flux inversions constrain anomalies in terrestrial ecosystems?. Atmospheric Chemistry and Physics, 2019, 19, 13017-13035. | 4.9 | 13 |
| 47 | Flexible parameter-sparse global temperature time profiles that stabilise at 1.5 and 2.0â€¯Â°C. Earth System Dynamics, 2017, 8, 617-626. | 7.1 | 12 |
| 48 | Are strong fireâ€“vegetation feedbacks needed to explain the spatial distribution of tropical tree cover?. Global Ecology and Biogeography, 2016, 25, 16-25. | 5.8 | 11 |
| 49 | Environmental performance of miscanthus-lime lightweight concrete using life cycle assessment: Application in external wall assemblies. Sustainable Materials and Technologies, 2021, 28, e00253. | 3.3 | 10 |
| 50 | Dynamic modelling shows substantial contribution of ecosystem restoration to climate change mitigation. Environmental Research Letters, 2021, 16, 124061. | 5.2 | 8 |
| 51 | A review of planting principles to identify the right place for the right tree for â€˜net zero plusâ€™ woodlands: Applying a placeâ€based natural capital framework for sustainable, efficient and equitable (<scp>SEE</scp>) decisions. People and Nature, 2023, 5, 271-301. | 3.7 | 8 |
| 52 | Reconciling Precipitation with Runoff: Observed Hydrological Change in the Midlatitudes. Journal of Hydrometeorology, 2015, 16, 2403-2420. | 1.9 | 7 |
| 53 | Are Landâ€Use Change Emissions in Southeast Asia Decreasing or Increasing?. Global Biogeochemical Cycles, 2022, 36, . | 4.9 | 7 |
| 54 | Surfaceâ€Atmosphere Coupling Scale, the Fate of Water, and Ecophysiological Function in a Brazilian Forest. Journal of Advances in Modeling Earth Systems, 2019, 11, 2523-2546. | 3.8 | 6 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | JULES-BE: representation of bioenergy crops and harvesting in the Joint UK Land Environment Simulator vn5.1. Geoscientific Model Development, 2020, 13, 1123-1136. | 3.6 | 6 |
| 56 | Regional variation in the effectiveness of methane-based and land-based climate mitigation options. Earth System Dynamics, 2021, 12, 513-544. | 7.1 | 6 |
| 57 | How can the First ISLSCP Field Experiment contribute to present-day efforts to evaluate water stress in JULESv5.0?. Geoscientific Model Development, 2019, 12, 3207-3240. | 3.6 | 4 |
| 58 | Simulating Increased Permafrost Peatland Plant Productivity in Response to Belowground Fertilisation Using the JULES Land Surface Model. Nitrogen, 2022, 3, 260-283. | 1.3 | 2 |
| 59 | Emulation of high-resolution land surface models using sparse Gaussian processes with application to JULES. Geoscientific Model Development, 2022, 15, 1913-1929. | 3.6 | 1 |
| 60 | Uncertain effectiveness of Miscanthus bioenergy expansion for climate change mitigation explored using land surface, agronomic and integrated assessment models. GCB Bioenergy, 0, , . | 5.6 | 1 |