Appendix 1

METHODS

Bird diversity

In addition to our major assessment (i.e., presented in the paper), we initially inspected the pattern in relative abundance of each species at an increasing level of urbanization (i.e., based on proportion of built-up areas). Several conventional concepts regarding the response of wildlife species to urban gradient is available (Blair 1996, Rodewald and Gehrt 2014, Fischer et al. 2015). Here, we followed such conceptual understanding to visualize urban affinity of each birds at three levels: (i) urban dependents with peaked relative abundance in highly built-up areas (i.e., areas containing impervious surface >80%); (ii) urban exploiters, which are abundant/common species with high relative abundance at a suburban/intermediate level of built-up areas (i.e., areas containing impervious surface between >30% and <80%) and in urban green areas; (iii) urban tolerant birds, which are uncommon/infrequent species across urban areas, and are abundant/common species with peaked relative abundance only in lightly urbanized areas (i.e., areas containing impervious surface <30%) and at urban green areas.

Table A1.1 Variables and sources

Variables	Description	Source
Percentage of impervious surface	Value 0-100, Percentage of 'Impervious surface' from 'Global Man-made Impervious Surface (GMIS) and Global Human Built-up and Settlement Extent (HBASE) data products', spatial resolution ~30m.	Brown de Colstoun et al. 2017
Habitat Shannon metric	Value of 'Diversity of EVI (Enhanced Vegetation Index)', from Global Habitat Heterogeneity dataset, spatial resolution ~ 30 arc-second.	Tuanmu and Jetz 2015
Distance to the nearest park	Distance (m) from grid cell centroids to the nearest edge of park. Value is estimated using ArcGIS tools.	OpenStreetMap contributors 2018
Distance to the nearest waterbody	Distance (m) from grid cell centroids to the nearest edge of waterbody. Value is estimated using ArcGIS tools.	OpenStreetMap contributors 2018
Percentage of vegetation	Value from 'Average maximum green vegetation fraction, MODIS- maximum green vegetation fraction, based on 12 years (2001-2012), spatial resolution ~1Km.	Broxton et al. 2014
Human population	Value of estimated number of people per grid square, Spatial resolution ~0.000833333 decimal degrees (approx 100m at the equator).	WorldPop 2017
Poverty index ratio	Estimates of mean likelihood of living in poverty per grid square, as defined by $2.50 a day poverty line, spatial resolution ~0.00833333 decimal degrees (approx. 1km at the equator).	Steele et al. 2017
Household income	Estimates of mean household income in USD per grid square. spatial resolution ~0.00833333 decimal degrees (approx. 1km at the equator).	Steele et al. 2017
Higher education percentage	Percentage of adults who have completed university at Upazila (Smallest administrative unit) level. Dataset derived from '2011 Census of Population and Housing'.	Bangladesh Bureau of Statistics 2011, Minnesota Population Center 2015

ADDIITONAL LITERATURE CITED

Bangladesh Bureau of Statistics. 2011. Population and housing Census, Bangladesh. [online] URL: http://www.bbs.gov.bd/

Blair, R. B. 1996. Land use and avian species diversity along an urban gradient. Ecological Applications 6: 506–519.

Brown de Colstoun, E.C., C. Huang, P. Wang, J. C. Tilton, B. Tan, J. Phillips, S. Niemczura, P-Y. Ling and R. E. Wolfe. 2017. Global Man-made Impervious Surface (GMIS) Dataset from Landsat. Palisades, NY: NASA Socioeconomic Data and Applications Center (SEDAC). doi: https://doi.org/10.7927/H4P55KKF

Broxton, P.D., X. Zeng, W. Scheftic, and P. A. Troch. 2014. A MODIS-Based 1 km Maximum Green Vegetation Fraction Dataset, Journal of Applied Meteorology and Climatology. [online] URL: http://dx.doi.org/10.1175/JAMC-D-13-0356.1

Fischer, J.D., S.C. Schneider, A. A. Ahlers, and J.R. Miller. 2015. Categorizing wildlife responses to urbanization and conservation implications of terminology. Conservation Biology 29(4):1246-1248.

Minnesota Population Center. 2015. Integrated Public Use Microdata Series (IPUMS), International: Version 6.4 [dataset]. Minneapolis: University of Minnesota. Available from the Integrated Public Use Microdata Series project. [online] URL: http://doi.org/10.18128/D020.V6.4

OpenStreetMap contributors. 2018. Dhaka, Bangladesh OSM polygons. Retrieved on 01.01.2018. [online] URL: https://planet.openstreetmap.org

Rodewald, A. D., and S. D. Gehrt. 2014. Wildlife population dynamics in urban landscapes. In: Robert A. McCleery, Christopher E. Moorman, M. Nils Peterson (eds), Urban Wildlife Conservation, Theory and Practice, Chapter 8, pp:132-133. Springer, New York.

Steele, J. E. et al. 2017. Mapping poverty using mobile phone and satellite data. J. R. Soc. Interface 14, 20160690. [online] URL: http://rsif.royalsocietypublishing.org/content/14/127/20160690

Tuanmu, M.N., and W. Jetz. 2015. A global, remote sensing-based characterization of terrestrial habitat heterogeneity for biodiversity and ecosystem modelling. Global Ecology and Biogeography. [online] URL: https://doi.org/10.1111/geb.12365

WorldPop. 2017. Bangladesh 100m Population, Version 2. University of Southampton. DOI: 10.5258/SOTON/WP00533.