13th International Geography Olympiad

Beijing, China

16–22 August 2016

Written Response Test

Resource Booklet

Do NOT open the Booklet before instructed to do so by a supervisor.

Do NOT write any of your answers in this Booklet.

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Written Response Test
Contributions from: Belgium, China Hong Kong, Czech Republic, Indonesia, Poland, Singapore
Committee Convenor: Anu Printsmann (Estonia)
Deputy: Dubravka Spevec (Croatia)
Editors: Jason Flowers (USA), Celestine Hang (Singapore), Alexey Naumov (Russia)
Director of Tests: Susan Lomas (UK)

Section A: Landslides

Figure A1: A photograph taken on the island of Viti Levu, Fiji (http://www.panoramio.com/photo_explorer#user=264133&with_photo_id=1282494&order=date_desc).

Section C: Phewa Lake in Nepal

Figure C1: Height contour map of the region around Phewa Lake
(adapted from http://www.geocontext.org/publ/2010/04/profiler/en).

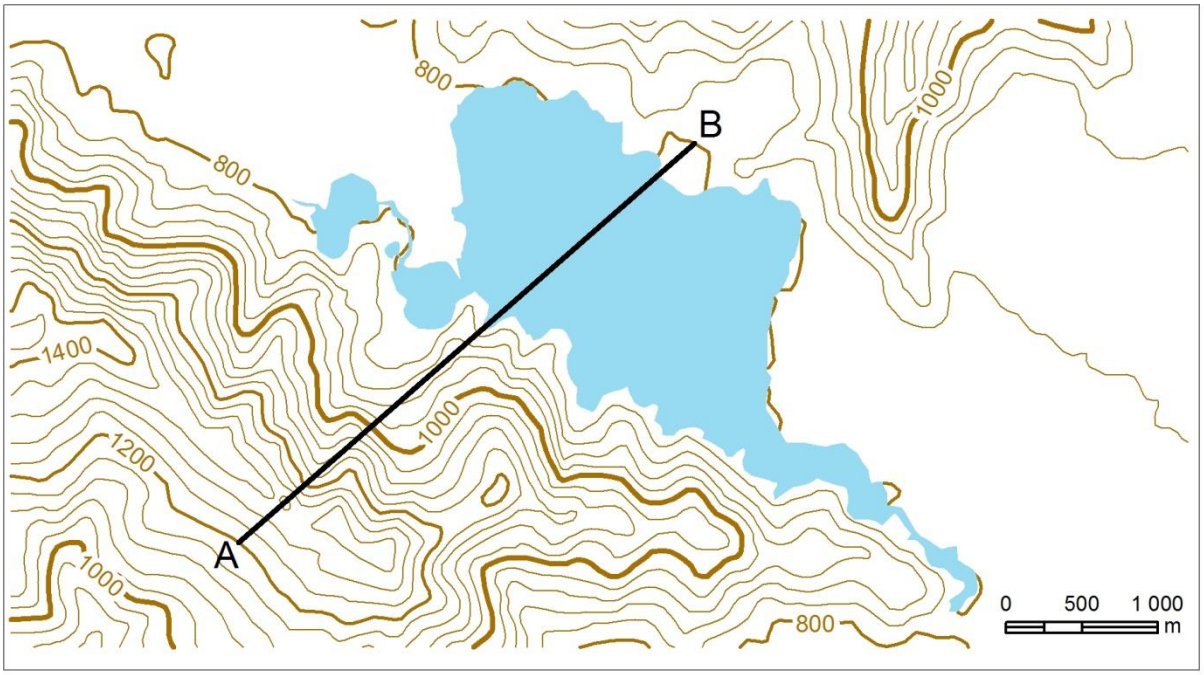


Figure C2: A land use map of the Phewa Lake Catchment Area
(Bundesanstalt für Geowissenschaften und Rohstoffe).

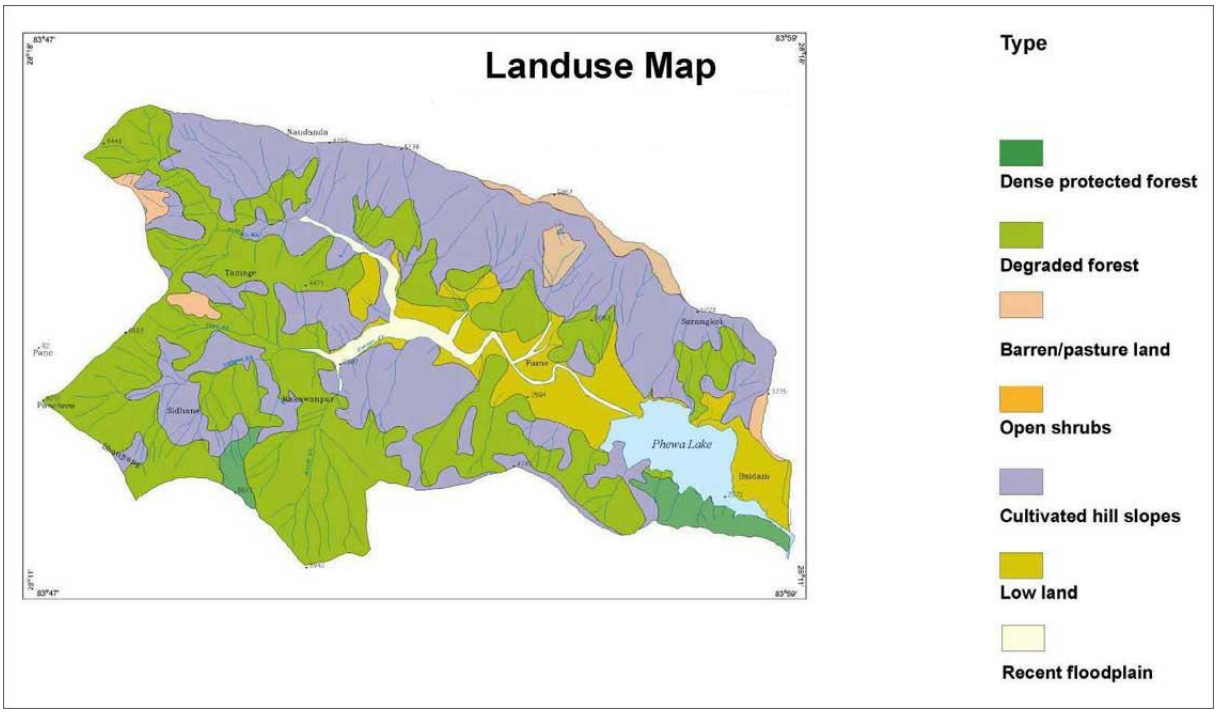
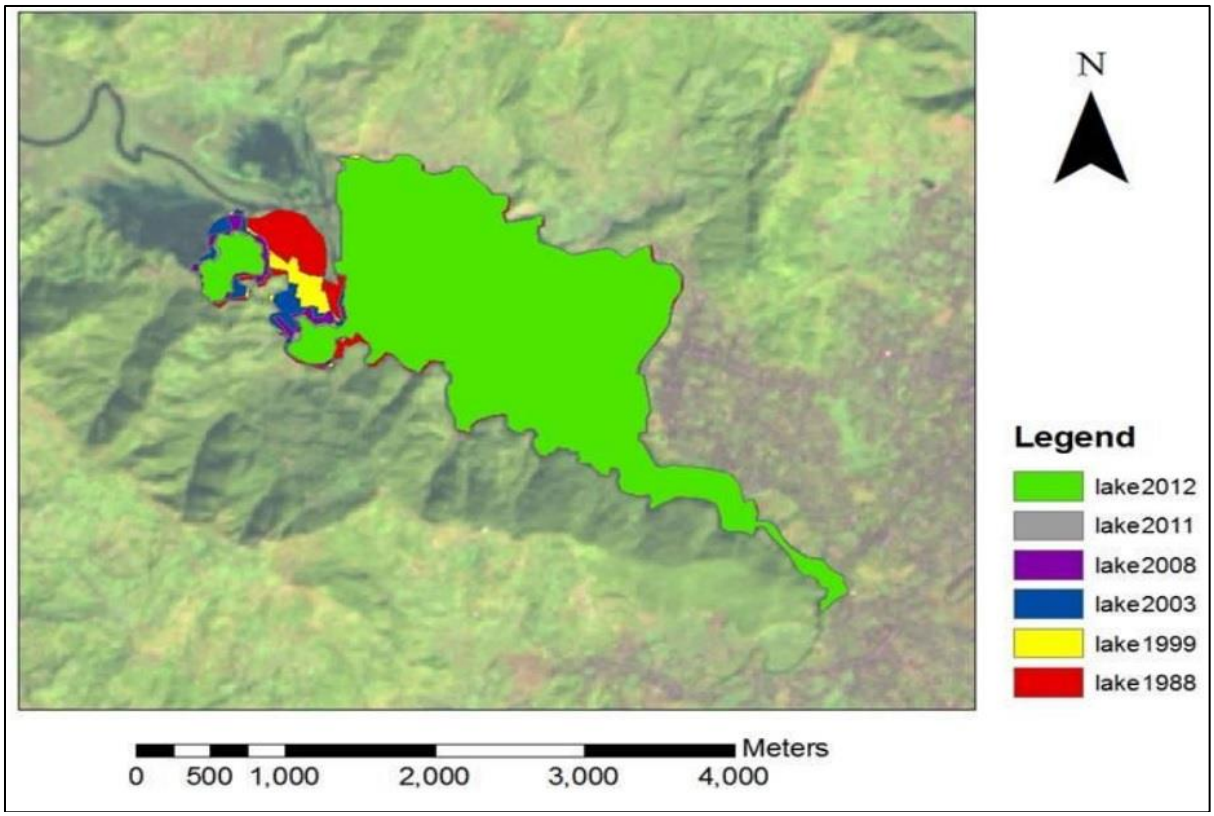


Figure C3: Change in Phewa Lake area between 1988 and 2012

(Heyojoo, B.P. and P. Takhachhe 2014: An assessment of lake area shrinkage through geospatial approach: case study of Phewa Lake of Kaski district, Nepal. *International Journal of Multidisciplinary and Current Research* 2 (4): 725–728).



Section D: Wind Speed

Figure D1: Wind speed and wind turbine power output (http://www.wind-power-program.com/mean_power_calculation.htm, http://www.wind-power-program.com/popups/powercurve.htm).

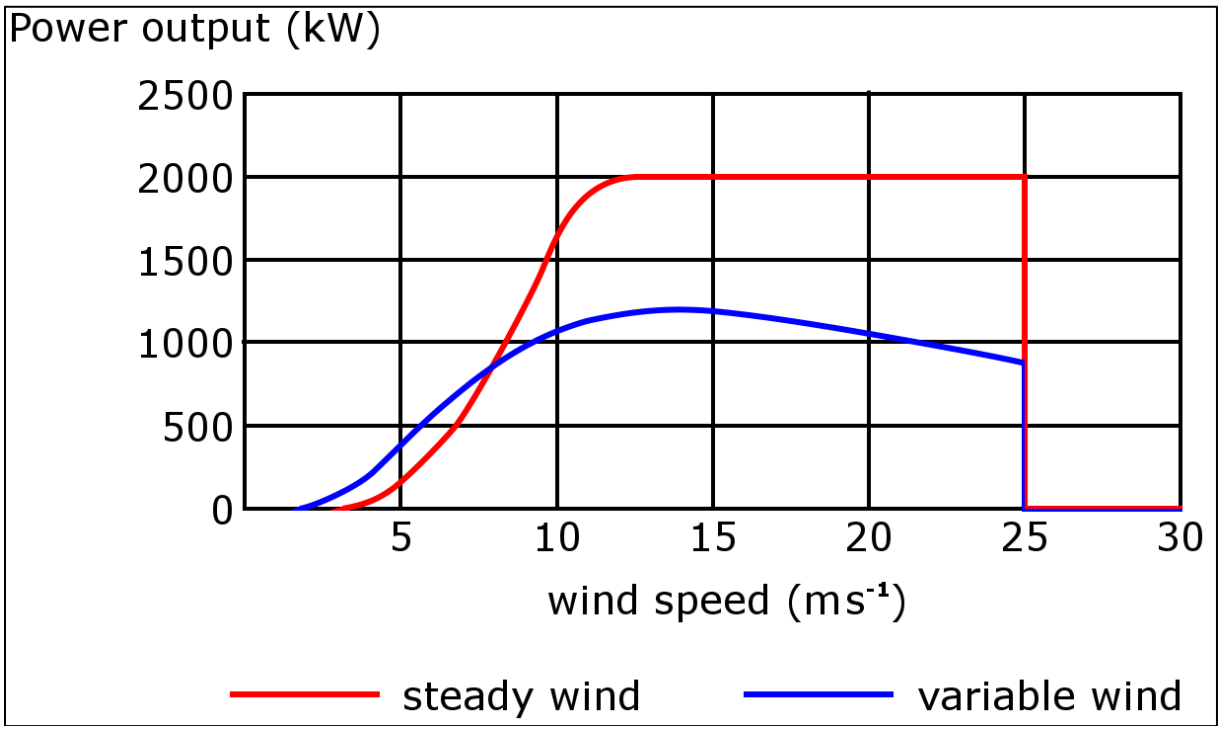


Figure D2: Distribution of annual mean wind speed at 80 m above ground level (http://www.vaisala.com/Vaisala%20Documents/Scientific%20papers/Vaisala_global_wind_solar_map_toolki.pdf).

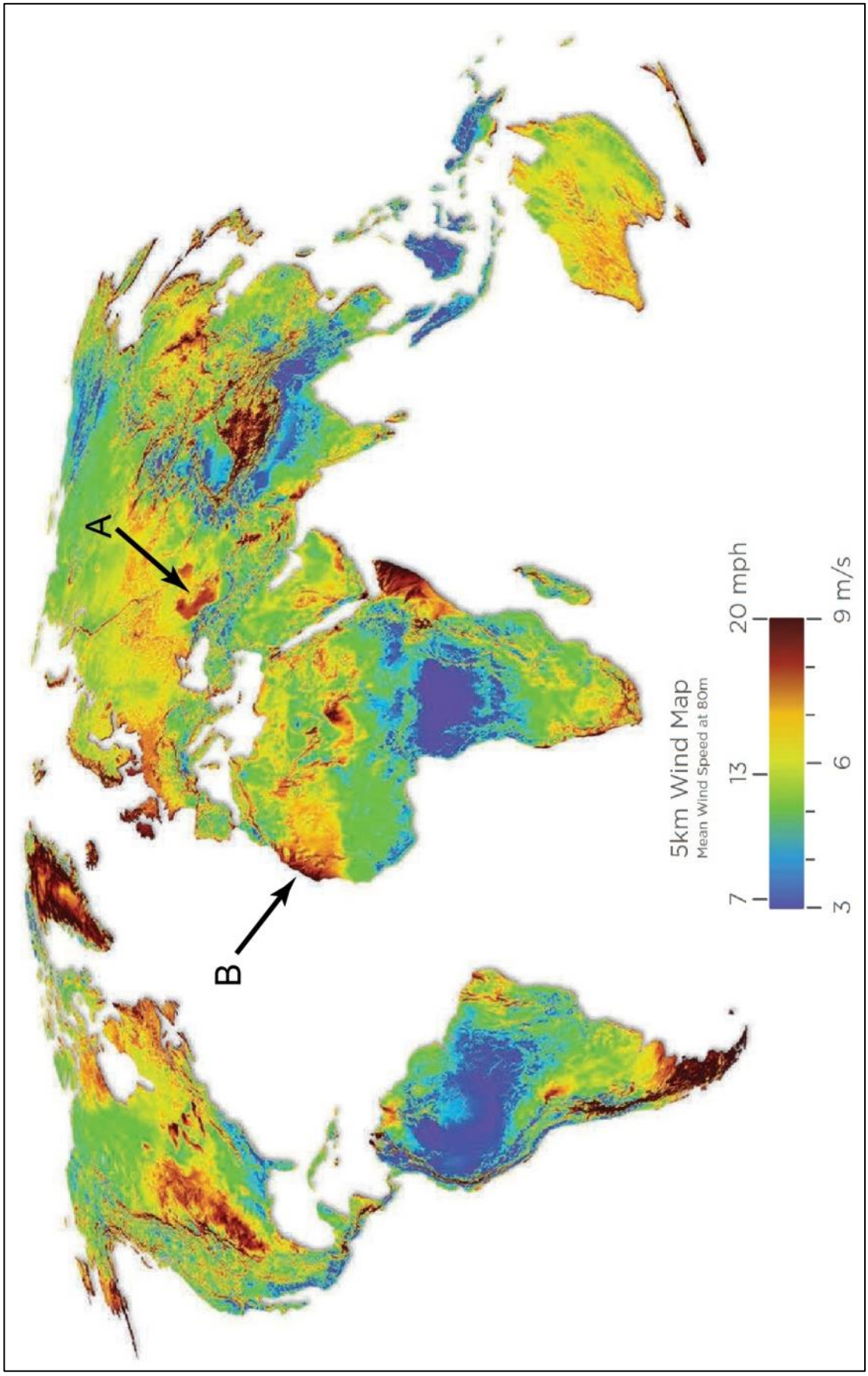


Figure D3: A photo of a wind farm
(http://northeastwindmills.com/green-energy-collapsing-in-spain-as-government-support-runs-dry).

Section E: Population Trends and Challenges

Table E1: Age and sex structure in United Arab Emirates (UAE) (2014) (Demographic Yearbook, United Nations' Data, 2015).

Age group	Male	%	Female	%	Total
0–4	145,601	3.5	136,538	3.3	282,139
5–9	139,929	3.4	129,453	3.2	269,382
10–14	130,778	3.2	118,279	2.9	249,057
15–19	121,388	3.0	110,838	2.7	232,226
20–24	272,036	6.6	161,530	3.9	433,566
25–29	483,657	11.8	178,137	4.3	661,794
30–34	489,879	11.9	150,482	3.7	640,361
35–39	386,762	9.4	113,844	2.8	500,606
40–44	262,718	6.4	78,543	1.9	341,261
45–49	174,459	4.3	51,311	1.3	225,770
50–54	107339	2.6	31,539	0.8	138,878
55–59	51,303	1.3	15,804	0.4	67,107
60–64	18,820	0.5	8527	0.2	27,347
65–69	9172	0.2	5285	0.1	14,457
70–74	5391	0.1	4013	0.1	9404
75–79	2440	0.1	1837	0	4277
80–84	1537	0	1439	0	2976
85+	1250	0	1165	0	2415
UAE total	**2,804,459**	**100**	**1,198,564**	**100**	**4,103,023**

Table E2. United Arab Emirates (UAE) selected demographic data (2000–2014) (http://worldpopulationreview.com/countries/united-arab-emirates-population).

United Arab Emirates	2000	2005	2010	2014
Birth rate (‰)	18.00	18.78	15.98	15.54
Death rate (‰)	3.68	4.26	2.08	1.99
Total fertility rate	3.29	2.94	2.41	2.36
Population growth rate (%)	1.61	1.54	3.56	2.71
Net migration (‰)	1.82	0.84	21.71	13.58
Total population	**2,369,153**	**2,563,212**	**4,975,593**	**5,628,805**

Section F: Urban Theories and Development

Figure F1: A photo of Barcelona, Spain
(https://commons.wikimedia.org/wiki/File: …_of_Barcelona_(2).JPG).

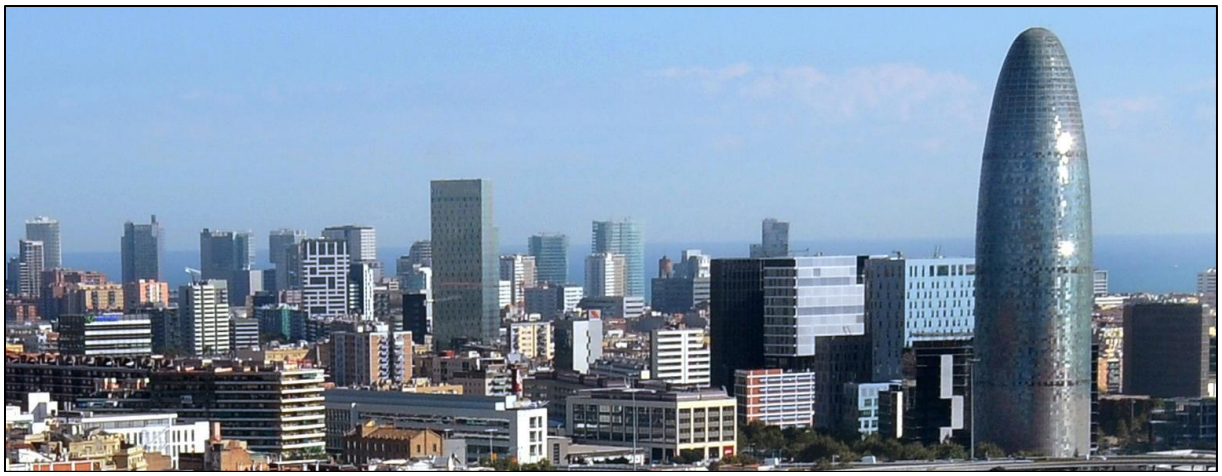
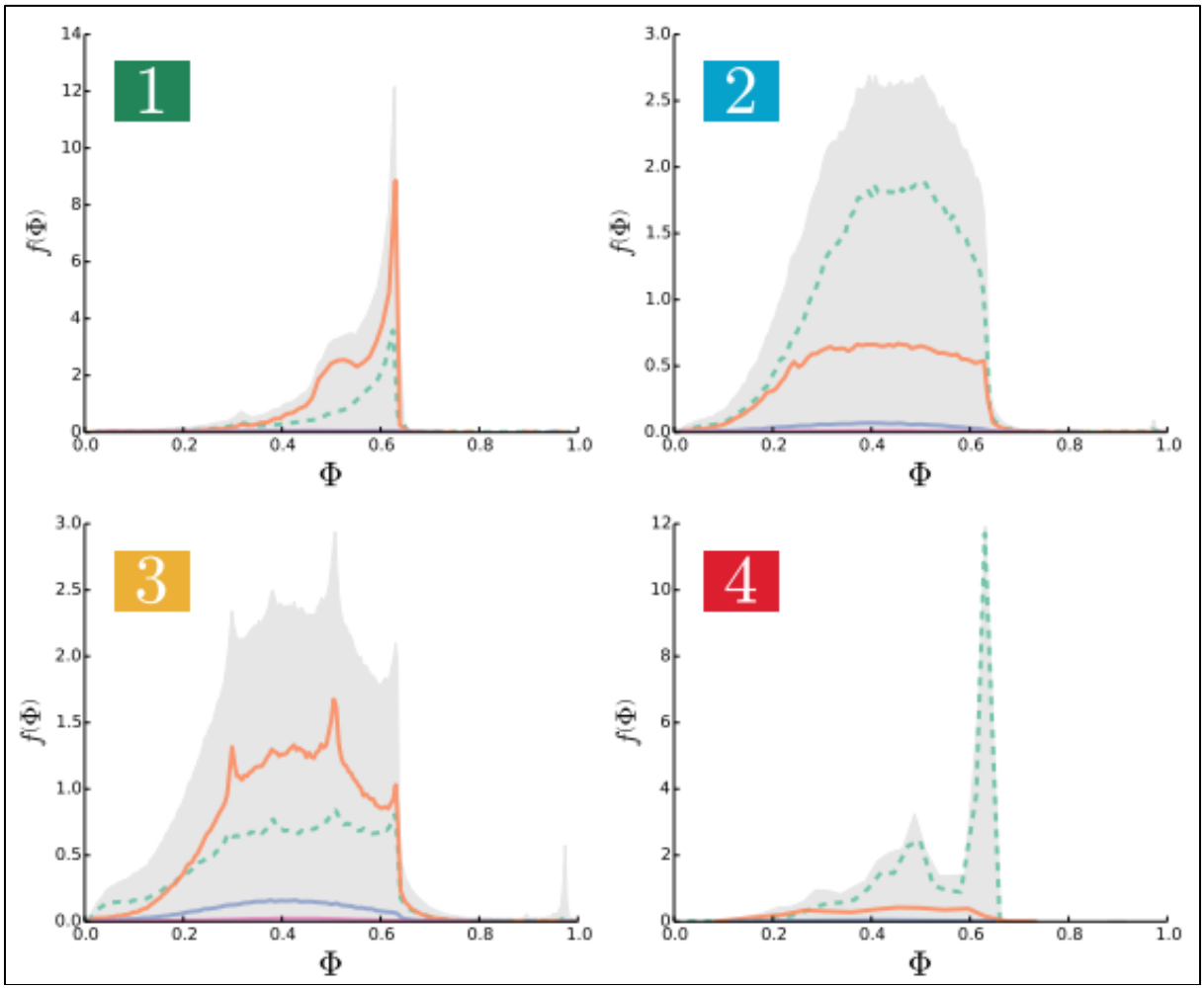


Figure F2: Urban “fingerprints”.
The X-axis (shape) represents the ratio of a street block’s area to the area of a circle that would enclose it. This value is always less than 1 and the smaller its value, the more irregular and extended the shape.
The Y-axis (area) represents the area of a block.

- The dashed green line represents small blocks,
- The orange line represents medium-sized blocks,
- The blue line represents large blocks, and
- The grey shading represents combined blocks

(https://www.technologyreview.com/s/531871/urban-fingerprints-finally-reveal-the-similarities-and-differences-between-american-and).



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