Chapter 15 Questions and Exercises

1. Cities of the world differ substantially in how well they are adapting to climate change and taking remedial action. CDP is a global information center that keeps track of such matters. You can access their data on carbon dioxide emissions for a large number of cities at <https://data.cdp.net/Emissions/2016-Citywide-Emissions-Map/iqbu-zjaj>.

* Go to the world map and select 10 cities from around the world.
* Measure the number of metric tons of CO2 emitted in each of these cities per person, by dividing metric tons by population.

Which of these cities have the highest emissions? Which the lowest among the cities you have selected?

* Which of these cities has seen an increase in per capita emissions? Which have seen a reduction?
* Using your browser, try to discover what environmental measures have been taken by the cities with a reduction in CO2 emissions.

1. Now go to the CDP data on renewable energy for cities, using

https://data.cdp.net/Renewable-Energy/2015-Renewable-Energy-in-Cities-USA/qqp5-vmdm

* Which cities listed depend the most on nonfossil fuel? Which cities are most dependent on fossil fuels?
* Using your browser, try to discover why some cities have moved so aggressively to use nonfossil fuel.
* What nonfossil fuel sources do each of these cities use?

1. Now go to the CDP data on the various energy sources around the world at <https://data.cdp.net/Renewable-Energy/City-wide-Electricity-Mix/ycef-psus/data>.

* Select ten cities of your choice (and make sure that no four are from the same continent), and set up a spreadsheet in which you enter the percentage of energy generated by each source.
* Calculate the share (percentage) generated by each source.
* Which three of these cities is still most heavily dependent on oil and gas?
* Which three of these cities relies the most on hydroelectric power?
* Have any of your ten cities moved in the direction of using solar or wind power?