
The Human Development Index

Audience: Level 2 Geography

Time Required: 15 minutes

Activity: Students will explore the spatial patterns of the Human Development Index (HDI) to identify regional patterns and causal factors in the data.

Standards: Some possible links to NZ Curriculum in this inquiry

- Geography AS 91242 Demonstrate geographic understanding of differences in development.

Learning Outcomes: Students will

- be able to analyse development statistics and see how development correlates with other APHG topics (for example, fertility and mortality).
-

Map URL: <http://arcg.is/1LXTfa>

Ask

What is development?

“Development” is a complicated word.

- ? What are some characteristics of a developed or less developed society?
- ? The UN creates an index from health, education, and wealth data from a nation’s populace.
 - Read a general introduction to the Human Development Index <http://bit.ly/2mBl6my>
- ? What statistics (numbers) are used to compile the Index? [*Health: life expectancy; education: years of schooling; wealth: per capita income.*]
 - Turn on the Human Development Index layer.
 - Click the New Zealand, then Fiji, then Kiribati. (Hint: Use the search tool find a place if you are not sure where Fiji and Kiribati are.)
- ? How does the index vary across these countries? [*New Zealand has the highest HDI (.91), Fiji has an HDI of .72, and Kiribati has an HDI of .6.*]
- ? What statistics (numbers) can you find to represent those ideas? [*Health: life expectancy; education: years of schooling; wealth: per capita income.*]

Acquire

How does development compare around the world?

- Zoom out to view the whole world
- ? Which regions are the most and least developed in the world? [The most developed regions are Europe and North America, whereas the least developed are Africa and Southeast Asia.]

Explore

How does crime affect development?

- Click the Central America bookmark.
- Turn on the Murder Rates Per 100,000 layer.
- ? Which two adjacent countries have the highest murder rates in the world? [*Honduras and El Salvador.*]
- ? What correlation is there between development and crime? [*A higher murder rate correlates with lower development index scores.*]

Analyse

What effect does birth rate have on development?

- Turn on the Total Fertility Rate layer.
- Find the regions with the highest rates of fertility by filtering the data.
- From the Contents pane, click Filter.
- Build this query: Total Fertility Rate 2012 Is Greater Than 3 (value).
- ? How does this statistic correlate with development? [*Higher fertility rates correlate with lower levels of development.*]

Evaluate

How does human equality affect development?

- Turn on the Gender Inequality Index layer.
- Turn on the GNI Per Capita layer.
- Turn the two layers off and on.
- ? What is the general relationship between these two layers? [*Wealthier countries have less gender inequality.*]
- Explore the regions of the world, either visually or by accessing the data in the table and filtering it.
- ? Is there a region that has very high per capita income but also experiences high levels of gender inequality? [*The Middle East, and the Persian Gulf oil states more specifically.*]
- ? How do these statistics about income and gender inequality affect their rankings on the HDI? [*Income raises the rankings, but gender inequality lowers the rankings of human development.*]

Key Skills

Filter

- Filter is only available for certain map layers.
- In the Contents pane, near the map layer name, click Filter.
- Set the filter parameters

Transparency

- From the Details pane, click the Content button.
- Click the three small blue dots and hover your pointer over the word Transparency to open a drop-down menu.
- You can modify transparency to see an active layer below the top layer.

Next Steps

DID YOU KNOW? ArcGIS Online is a mapping platform freely available to New Zealand public and private schools. A school subscription provides additional security, privacy, and content features. Learn more about ArcGIS Online and how to get a school subscription at <http://www.eagle.co.nz/gis-schools>.

THEN TRY THIS...

- Use Enrich Data (in the Analysis tools) to add additional demographic, population, or economic data to the existing HDI dataset for targeted geographies.
- Create a story map using demographic data to highlight the metrics that are a part of the HDI composite statistic. <https://storymaps.arcgis.com/en/how-to/>

Text References

- Wakefield, S. Differences in Development Pearson 2013
- Hensman, JM Mear, M. Development Inequalities Year 12 Geography Nelson Cenage 1999

NEW ZEALAND GEOINQUIRIES

<http://arcg.is/1GPDXe>