

TOOLS FOR GEOGRAPHICAL INQUIRY

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CARTOGRAMS: Ecological footprint

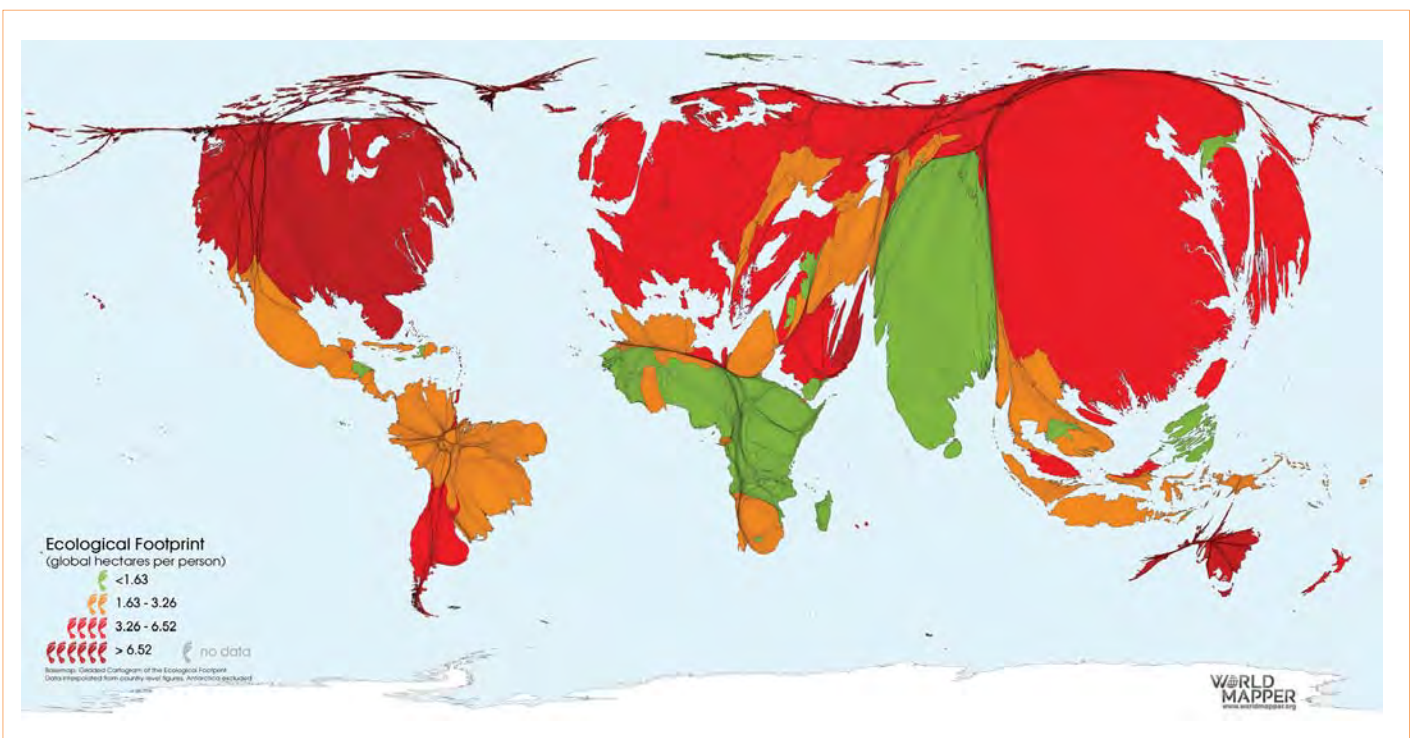
Link: Ecological Footprint. Dr Susan Bliss

Worldmapper cartograms distort our image of the world on purpose and show each country in proportion to a specific variable. Geographers use conventional maps as a reference map to understand the distortion with a more common image of the world based on area.

This cartogram shows land resized by its total ecological footprint. Each grid cell in the map is proportional to the total number of people living in that area multiplied by their national ecological footprint measured in global hectares consumption per capita.

'The Ecological Footprint of Consumption gives a picture of each country's and each person's total ecological footprint. The ecological footprint is a measure to quantify humanity's impact on the natural environment. It is calculated by estimating the carrying capacity of the natural environment and comparing this to the levels of consumption and waste. It is measured in global hectares (gha) for the average biological productivity in a given year.

A sustainable world would need an average ecological footprint of currently 1.63 gha. With changing consumption patterns and population developments, the gap between these two has growing constantly and exceeds the biosphere's regenerative capacity. This map shows the extent to which countries overuse the world's natural resources, colour coded by multiples of the carrying capacity of the planet.'



Data source: Global Footprint Network, National Footprint and Biocapacity Accounts 2019 Edition.– <https://worldmapper.org/maps/grid-ecologicalfootprint-2019/>

For identifying individual countries use the World Mapper interactive map or an Atlas map of the world.
<https://worldmapper.org/region/>

INFOGRAPHICS: Changing tundra environments

Link: [Subarctic and subantarctic tundra environments](#). Louise Swanson

Infographics present geographical information in summarised form using images, maps, graphs and text. They are useful tools for stimulating inquiry through questioning and further research. Students can create their own infographics to communicate geographically using tools such as Canva, Piktochart,



Source: https://commons.wikimedia.org/wiki/File:20070818-0001-strolling_reindeer.jpg*target=

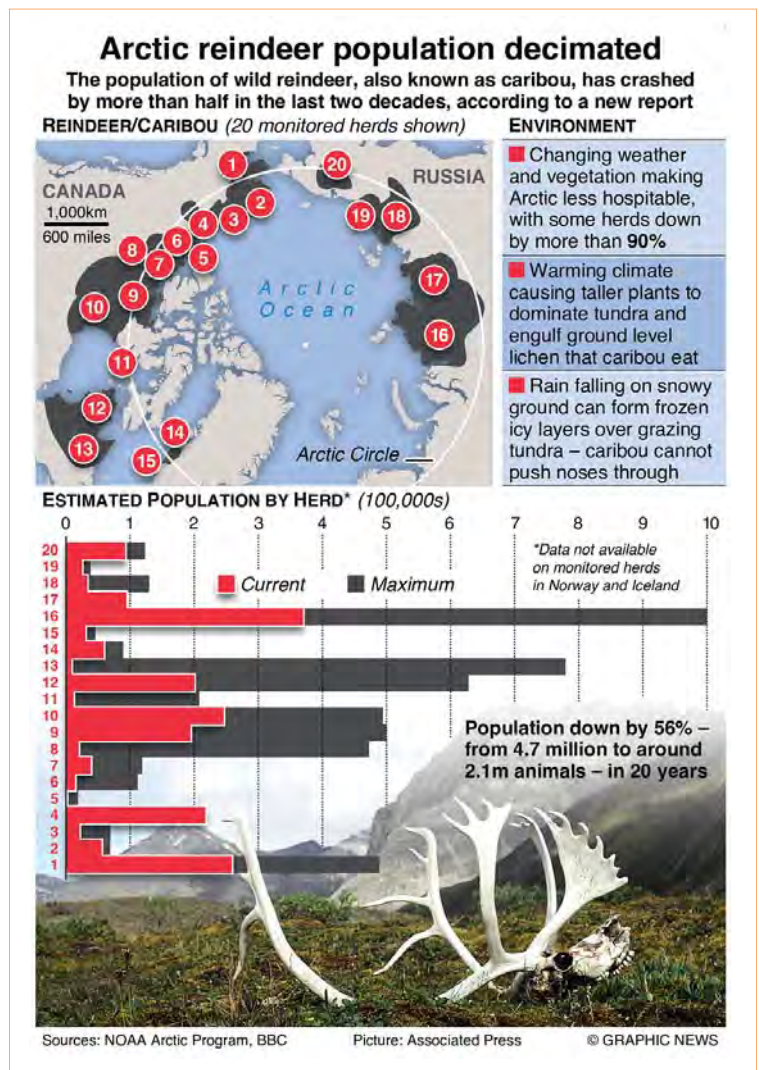
easel.ly and Vizualise.me.

'It's not just the reindeer that are suffering..... Besides seeing caribou and the ecosystems they support disappear or diminish, the report (2018 Arctic Report Card) indicates the air temperature in the region is the highest it's ever been, warming Arctic waters are resulting in harmful algae blooms, Arctic sea ice is thinner and less widespread than ever before and microplastics are beginning to infest Arctic marine ecosystems.'

Source: <https://www.smithsonianmag.com/smart-news/reindeer->



Source: L. sChaffer



[populations-have-plummeted-among-other-problems-arctic-180971023/](#)
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Source: https://upload.wikimedia.org/wikipedia/commons/d/dd/Caribou_herd.jpg