



True Size of Africa

The most prevalent flat maps make Africa appear much smaller than it is

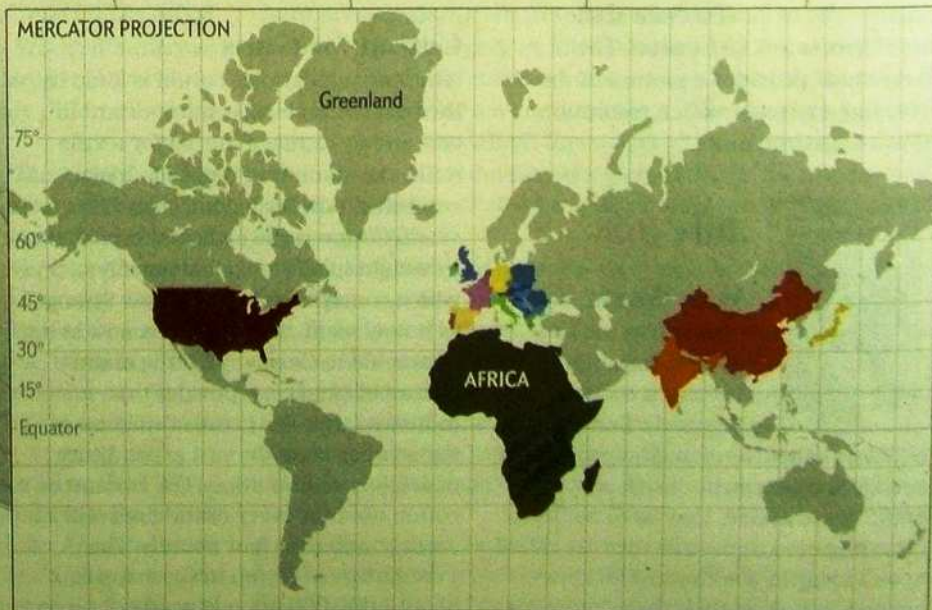
When shown in proper proportions, Africa swallows up China, India, the contiguous U.S. and much of Europe. Think of a world globe as a hollow crust: pop out the landmasses and set those slightly curved pieces onto Africa. And no, neither Russia nor Canada comes close in actual size.

On a flat map of the world, Greenland appears as big as Africa. In fact, Africa is 14 times larger. The distortion arises from a mathematical process, known as the Mercator projection, that converts the earth's spherical surface to a handy two-dimensional rectangle. The result is that the area of landmasses becomes increasingly exaggerated toward the poles. Africa should be shown to be larger than many big countries taken together. To correct widespread misconceptions, Kai Krause, a designer and author, devised a puzzle to show the true relations among landmasses (*above*). Understanding Africa's immense size helps us appreciate how difficult it may be to solve the continent's poverty and drought problems.

—Mark Fischetti

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For a ranking of country sizes, see ScientificAmerican.com/jul2015/graphic-science



SOURCE: KAI KRAUSE