

In our hyperconnected world, getting away from it all is easier said than done. Caroline Williams joins the As to the Bs

# It's a small world

**S**O YOU'VE hitch-hiked through Central America, stalked rare beasts in Madagascar and trekked your way through northern Chile. You're pretty well travelled, even if you do say so yourself. Before you get ideas about being an intrepid explorer, however, consider this. For all their wide open spaces and seeming wildernesses, none of these places can be described as remote in 2009.

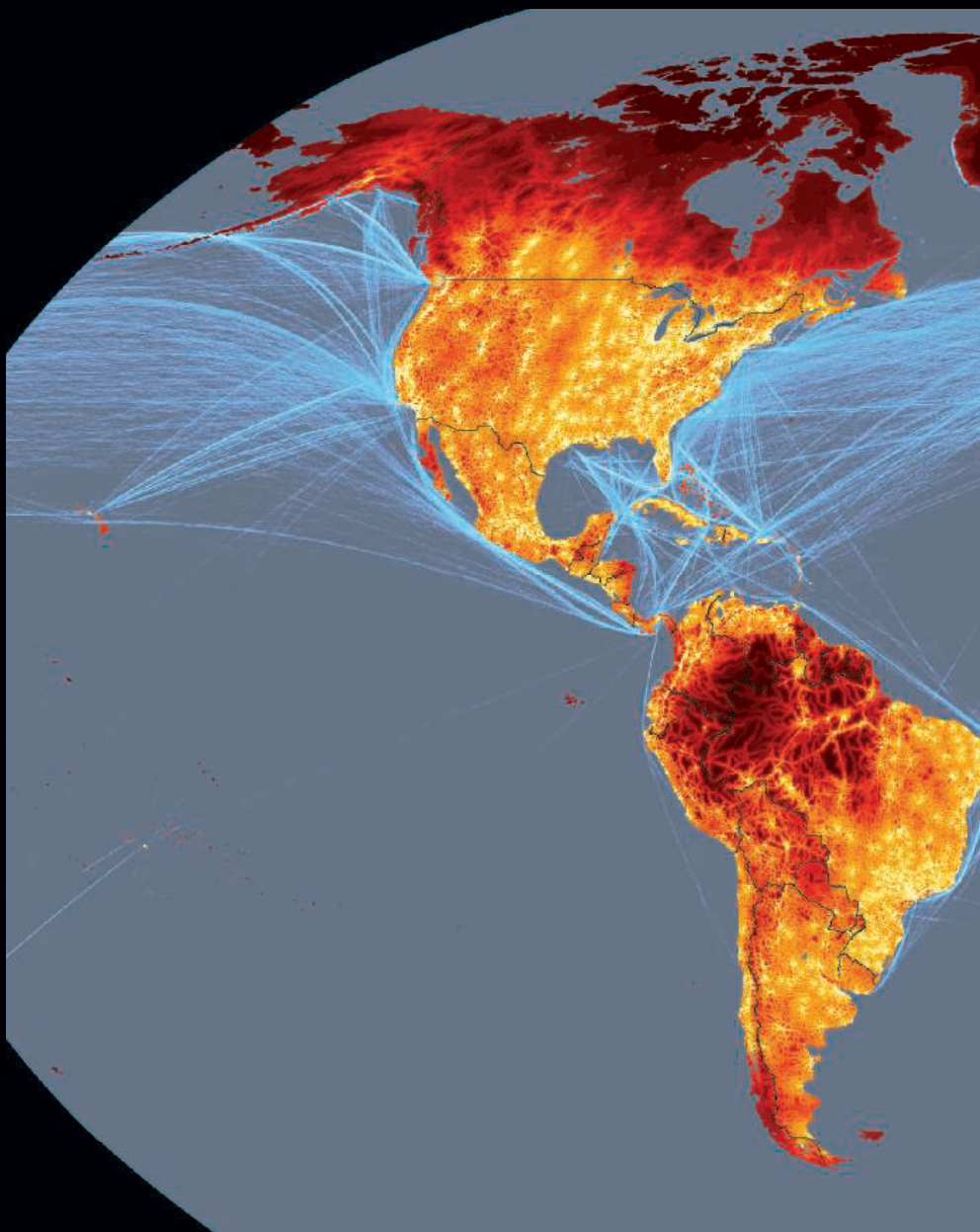
In fact, very little of the world's land can now be thought of as inaccessible, according to a new map of connectedness created by researchers at the European Commission's Joint Research Centre in Ispra, Italy, and the World Bank.

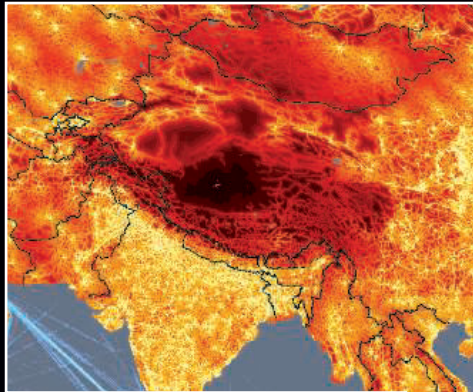
The maps are based on a model which calculated how long it would take to travel to the nearest city of 50,000 or more people by land or water. The model combines information on terrain and access to road, rail and river networks (see maps, page 42). It also considers how factors such as altitude, steepness of terrain and hold-ups like border crossings slow travel.

Plotted onto a map, the results throw up surprises. First, less than 10 per cent of the world's land is more than 48 hours of ground-based travel from the nearest city. What's more, many areas considered remote and inaccessible are not as far from civilisation as you might think. In the Amazon, for example, extensive river networks and an increasing number of roads mean that only 20 per cent of the land is more than two days from a city - around the same proportion as Canada's Quebec province.

The maps were created to show how the distribution of people affects their access to resources such as education and medical care, and how we are increasingly pushing wildlife out of even the wildest corners of our planet. And with this as a baseline, Alan Belward, who leads the project, hopes to follow how emerging economies will change the face of the world, for better or for worse: "The true value will be in doing the map again." >

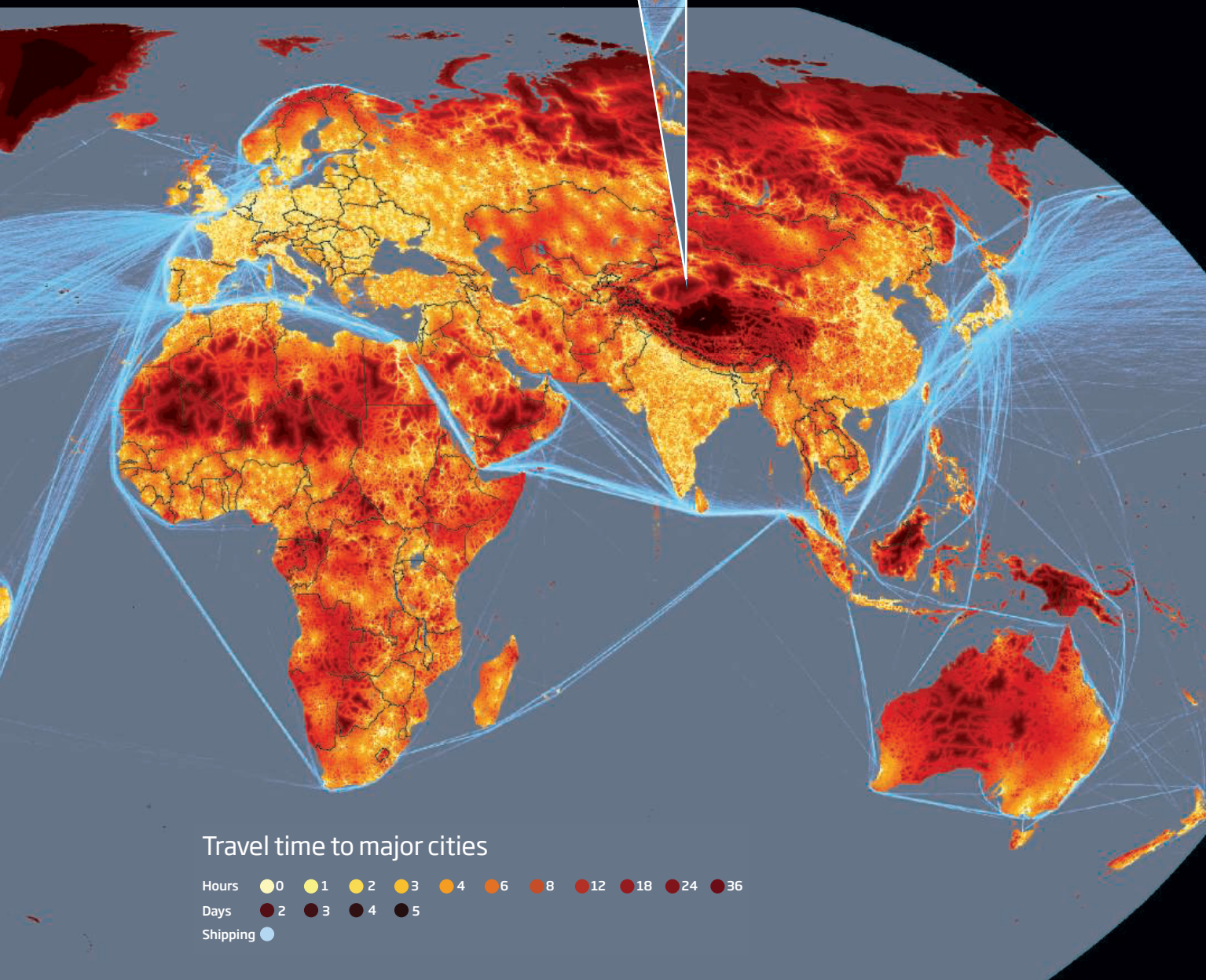
Caroline Williams is a *New Scientist* features editor





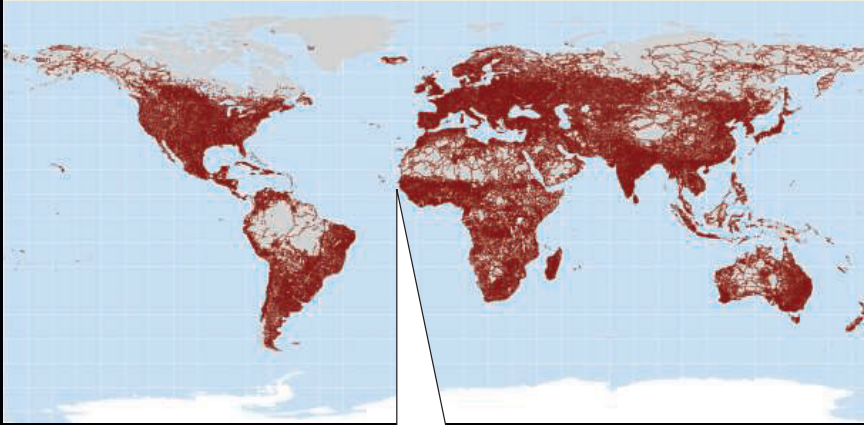
## NOWHERE, THREE WEEKS FROM ANYWHERE

It's official, the world's most remote place is on the Tibetan plateau (34.7°N, 85.7°E). From here, says Andy Nelson, a former researcher at the European Commission, it is a three-week trip to the cities of Lhasa or Korla - one day by car and the remaining 20 on foot. Rough terrain and an altitude of 5200 metres also lend it a perfect air of "Do Not Disturb".



## A ROAD TO SOMEWHERE

Based on satellite data from the US Geological Survey's National Imagery and Mapping Agency, this map shows how the world is riddled with roads. These can be further broken down to show road types (see detail map, below), which dictate how quickly a driver can zip along them (see table, right).



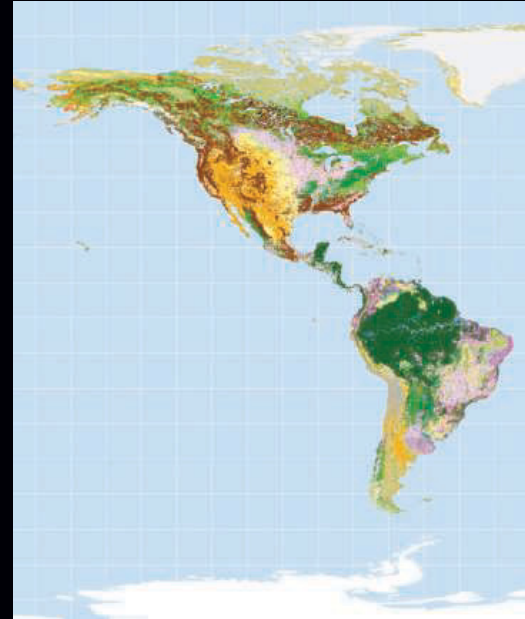
- Cities with more than 50,000 people
- Primary roads
- Secondary roads
- Tracks

"Less than 10 per cent of the world's land surface is more than two days away from the nearest city"

## How long it takes to travel 1 kilometre

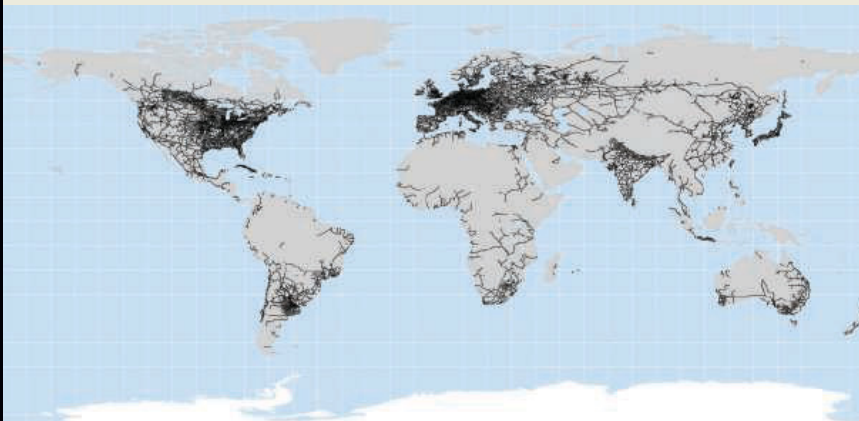
<b>Roads</b>	<b>Railways</b>	<b>Urban areas</b>
Motorways, 0.5 mins	1.5 mins	2 mins
Major roads, 1 min		
Tracks, 6 mins	<b>Shipping lanes</b>	Coastal waters, 1.5 mins
	<b>Crossing borders</b>	
	Variable from 1 min to 240 mins	<b>Navigable rivers</b>
		3 mins

<b>Land cover</b>	
Tree cover, broadleaved, deciduous	60 mins
Mosaic: tree cover/other natural vegetation	48 mins
Tree cover, burnt	48 mins
Snow and ice	48 mins
Tree cover, mixed or needle-leaved	36 mins
Cultivated and managed areas	36 mins
Shrub cover	36 mins
Cropland / shrub and/or grass cover	36 mins
Sparse herbaceous or sparse shrub cover:	24 mins
Bare areas	24 mins



## KEEPING TRACK OF TRAINS

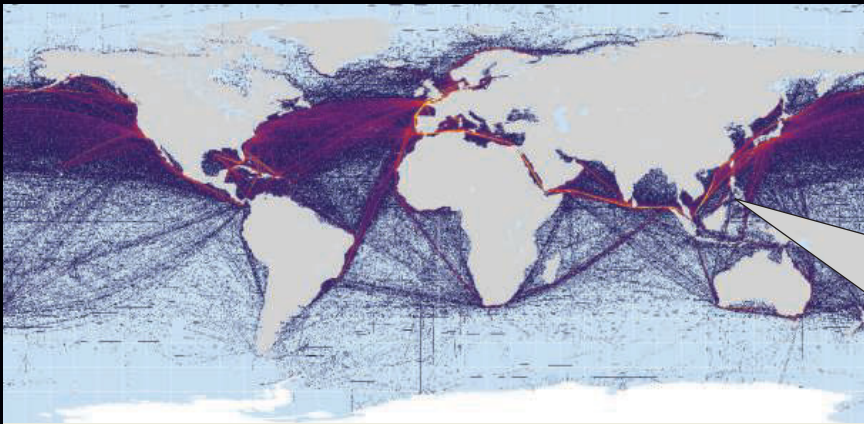
Unlike roads, which can evolve out of any old dirt track, railways require skilled labour and considerable investment. As a result, they are confined mainly to the richer nations of Europe, the US, Australia and Japan. Railway networks in India, Argentina and parts of Africa give clues to their colonial heritage.



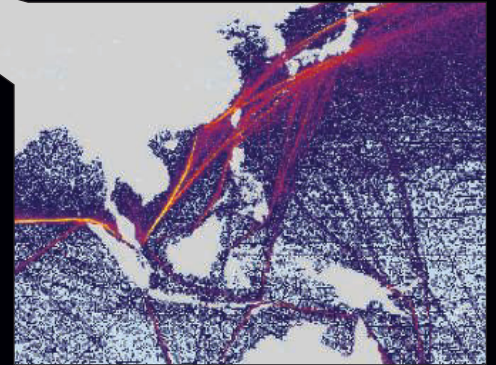
"The Amazon is generally considered inaccessible, but its extensive river and road networks mean much of its interior is no more remote than Quebec's"

### MORE ONLINE

See all these maps and more at [www.NewScientist.com/gallery/small-world](http://www.NewScientist.com/gallery/small-world)

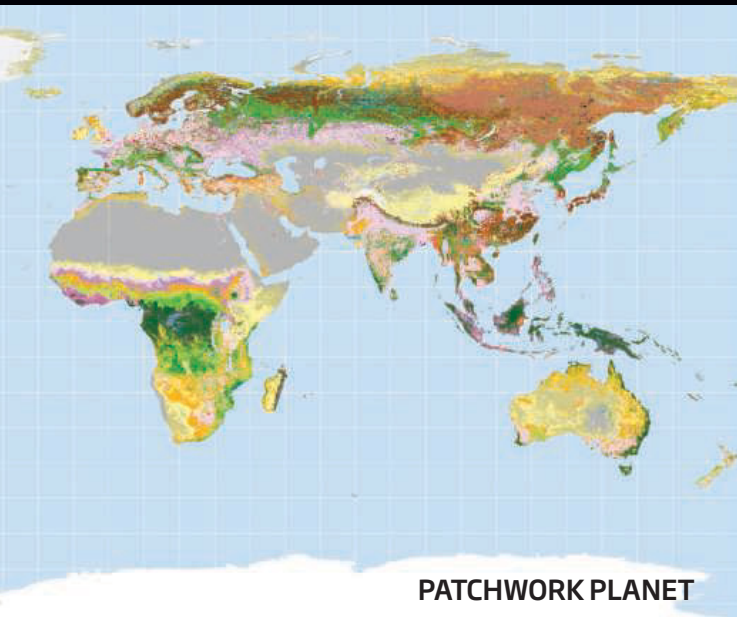


"China's flourishing export trade is clearly seen, with some of the world's busiest shipping lanes"



### THE SHIPPING NEWS

With the brightest colours representing the busiest shipping lanes, the English Channel, Mediterranean and South China Sea stand out as major trade routes. Regions to the far north and south are left out in the cold, at least for now.



- Tree cover, broadleaved, evergreen
- Tree cover, broadleaved, deciduous, closed
- Tree cover, broadleaved, deciduous, open
- Tree cover, needle-leaved, evergreen
- Tree cover, needle-leaved, deciduous
- Tree cover, mixed leaf type
- Tree cover, regularly flooded, fresh water
- Tree cover, regularly flooded, salty water
- Mosaic: tree cover / other natural vegetation
- Tree cover, burnt
- Shrub cover, closed/open, evergreen
- Shrub cover, closed/open, deciduous
- Herbaceous cover, closed/open
- Sparse herbaceous or sparse shrub cover
- Regularly flooded shrub and/or herbaceous
- Cultivated and managed areas
- Mosaic: cropland / tree cover/other natural vegetation
- Mosaic: cropland / shrub and/or grass cover
- Bare areas
- Snow and ice
- Artificial surfaces and associated areas
- No data

### PATCHWORK PLANET

### WATER WORLD

The planet's navigable rivers provide not only food and water, but also a valuable way of getting from A to B. In areas where no roads penetrate, such as the Guiana region of eastern Colombia, river travel is simply the quickest way to get around. The mapping model assumes a river travel time of 3 minutes per kilometre, though its creators point out that this will vary with flow, season and political stability.

