

Climate change and the prospects for Latin America

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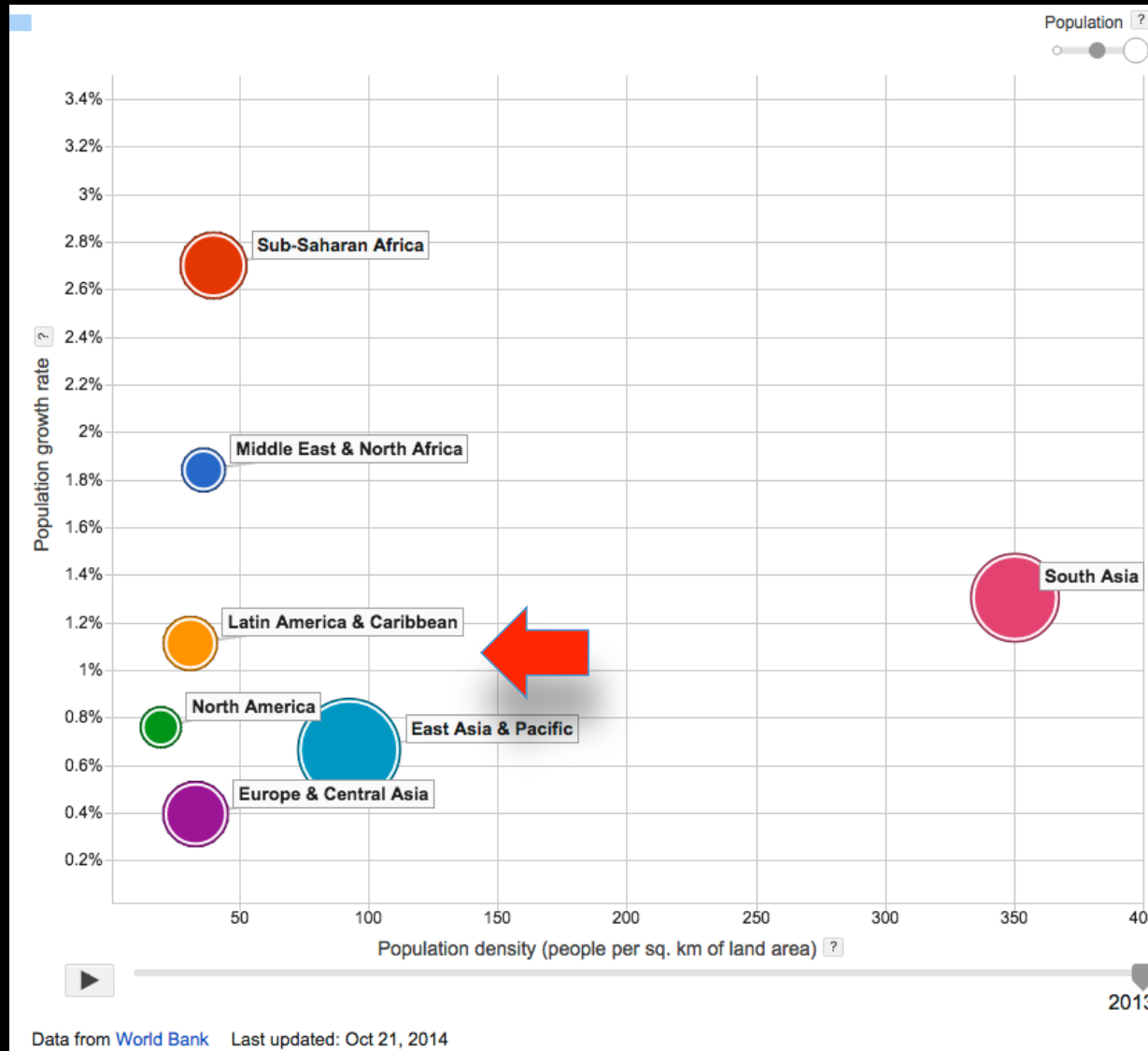
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Latin America: a favourable situation

- Latin America is in a privileged position to face and respond to climate change challenges
 - Population of the adequate size and structure:
 - Population density (urbanization)
 - Dependency ratio and demographic dividend
 - Life expectancy and income
 - Food production:
 - Very high biological diversity
 - Large and diverse agricultural lands
 - Significant fisheries potential
 - Multiple and large sources of energy
 - Large water supply reserves and moderate consumption

Latin America: population

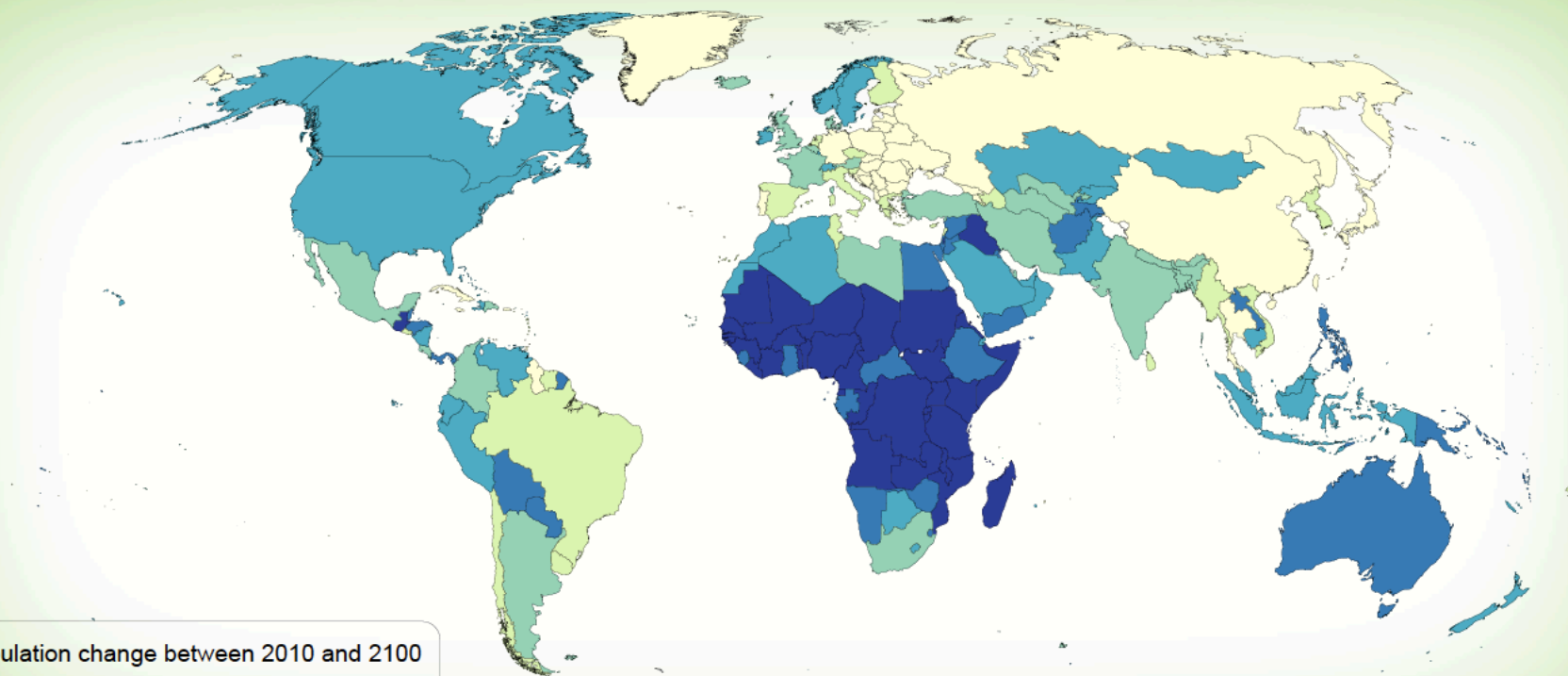
Population growth and density (updated 2014)



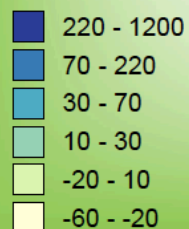
Latin America: population

Growth projections

World map: Projected population growth, 2010–2100



Percentage of population change between 2010 and 2100

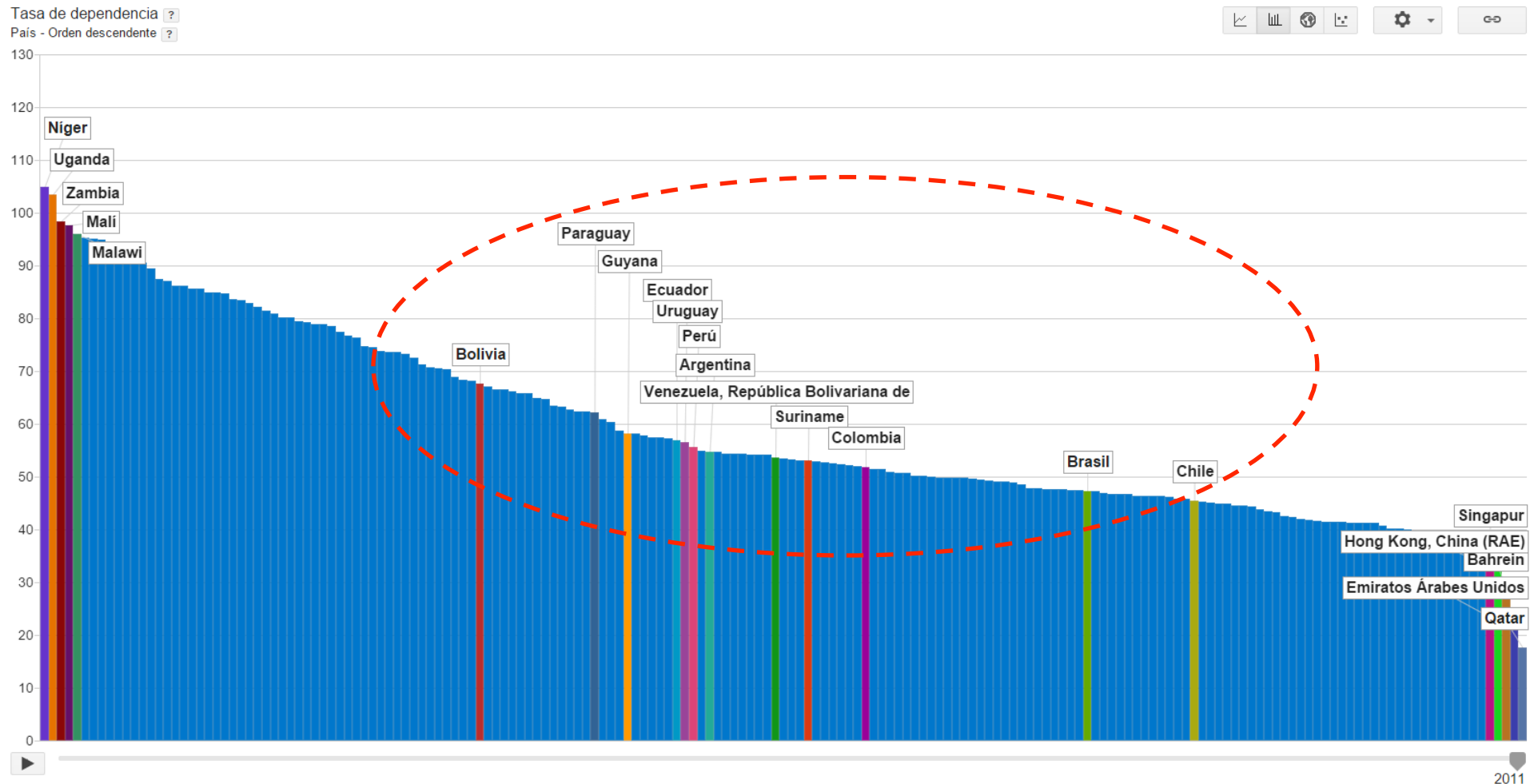


The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or any area or its authorities, or concerning the delimitation of its frontiers or boundaries.

Fuente: United Nations Population Division. World Population 2012. New York, 2013.

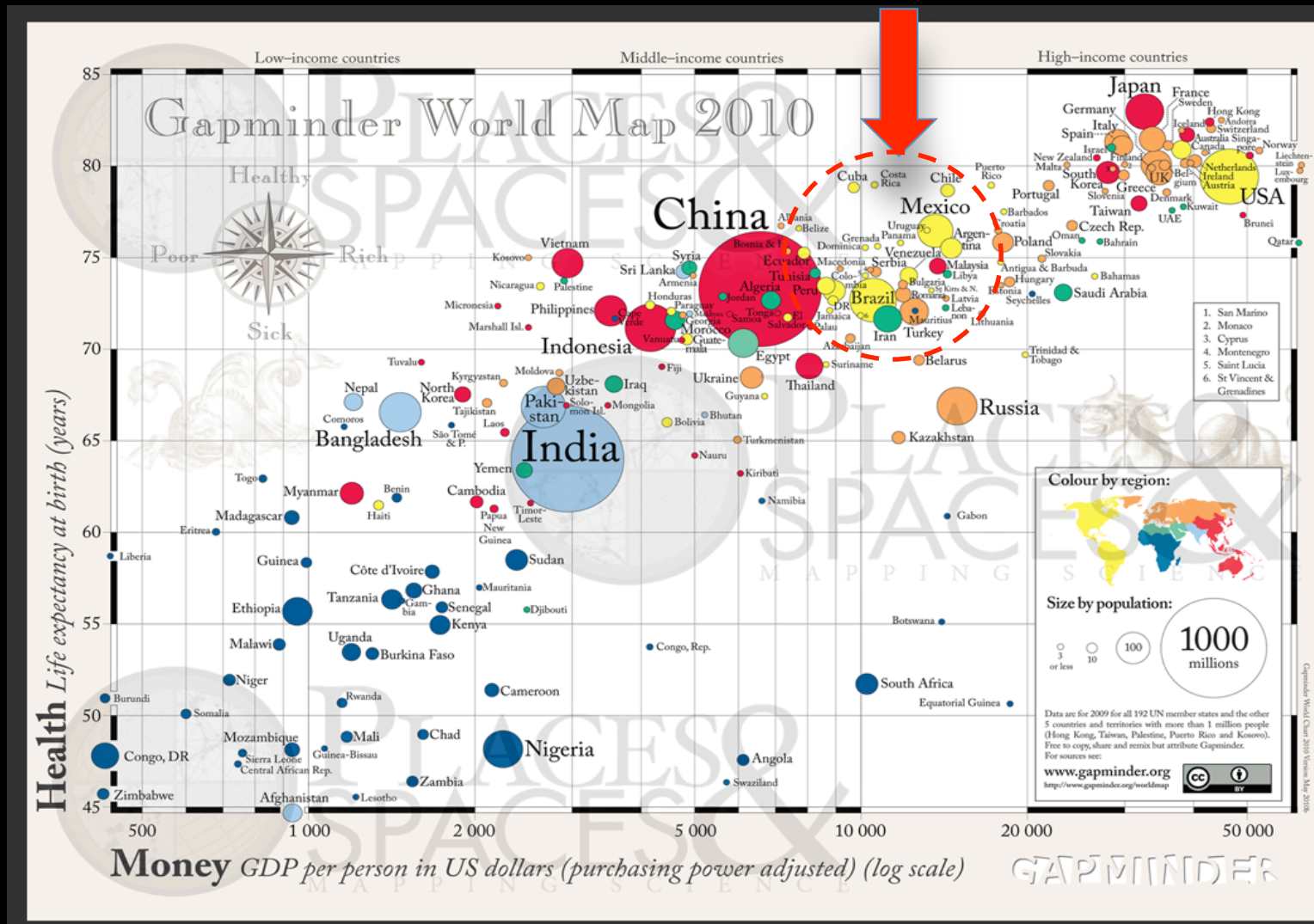
Latin America: population

Dependency ratio (% less than 15 and more than 64 years old, updated 2014)



Latin America: health and income

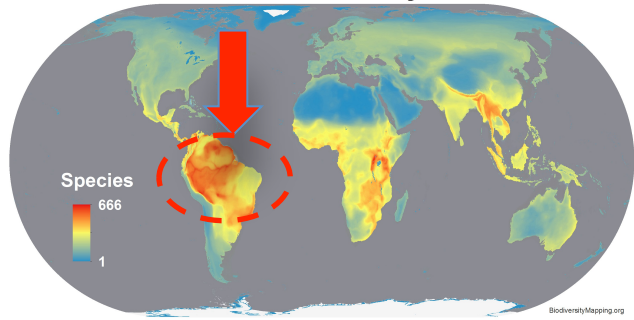
Life expectancy at birth and average income per capita (2010)



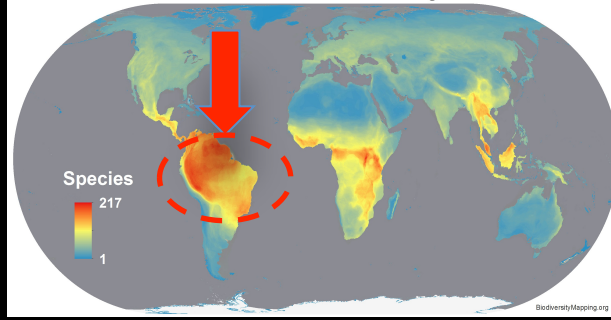
Lindgren, Mattias. 2010. Gapminder World Map. Courtesy of Gapminder Foundation. In "8th Iteration (2012): Science Maps for Kids," Places & Spaces: Mapping Science, edited by Katy Börner and Michael J. Stamper. <http://scimaps.org>

Latin America: biodiversity

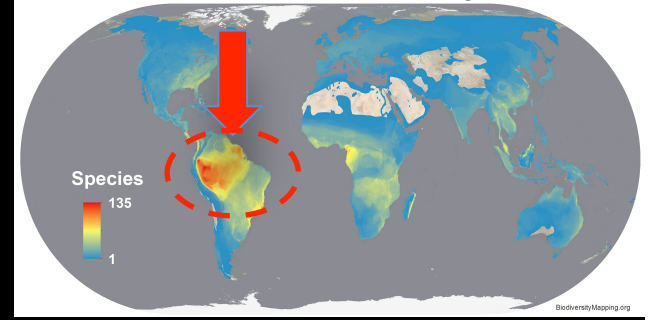
Bird Diversity



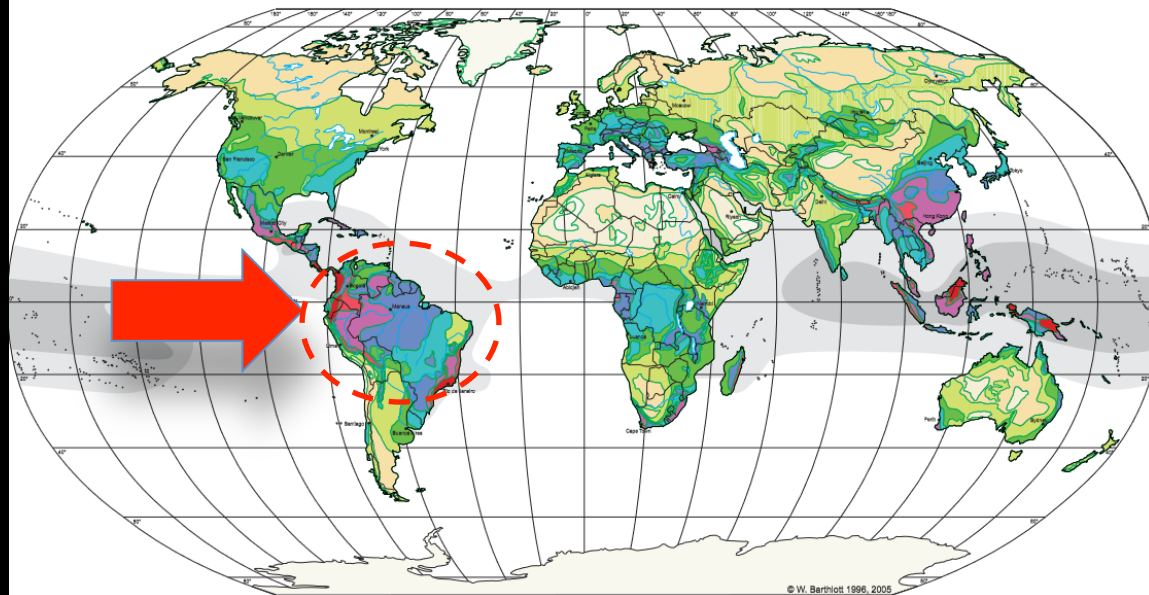
Mammal Diversity



Amphibian Diversity

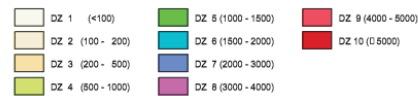


GLOBAL BIODIVERSITY: SPECIES NUMBERS OF VASCULAR PLANTS



Robinson Projection
Standard Parallels 38°N und 38°S

Diversity Zones (DZ): Number of species per 10 000km²



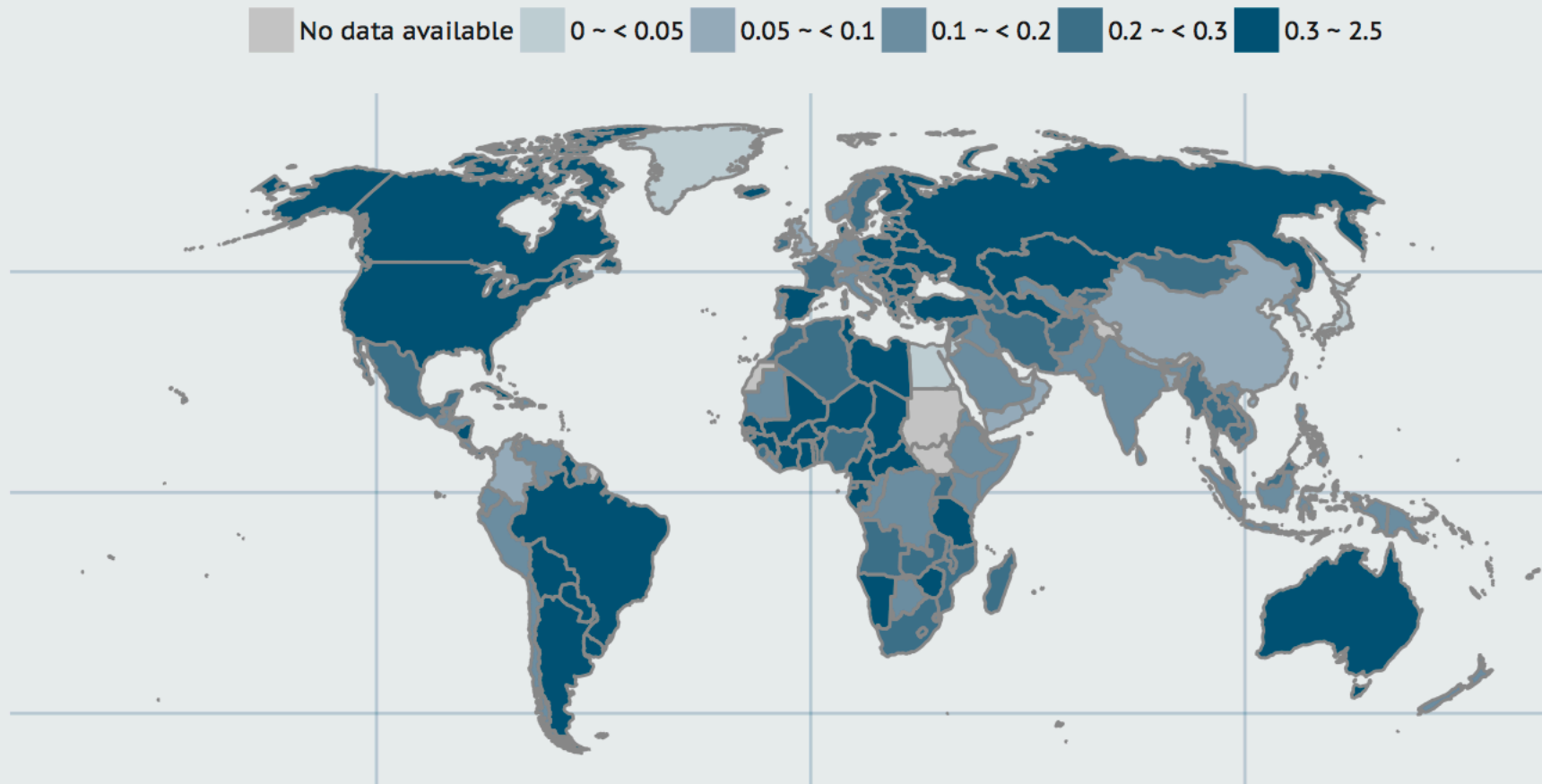
see surface temperature




W. Barthlott, G. Klar, H. Kraft, W. Küper, D. Rafiqpoor, & J. Mücke 2005
modified after
W. Barthlott, W. Lauer & A. Plagcke 1998
Nees Institute for Biodiversity of Plants
University of Bonn

Latin America: cropland per capita

MAP 6: Cropland per capita (ha/cap, 2009)

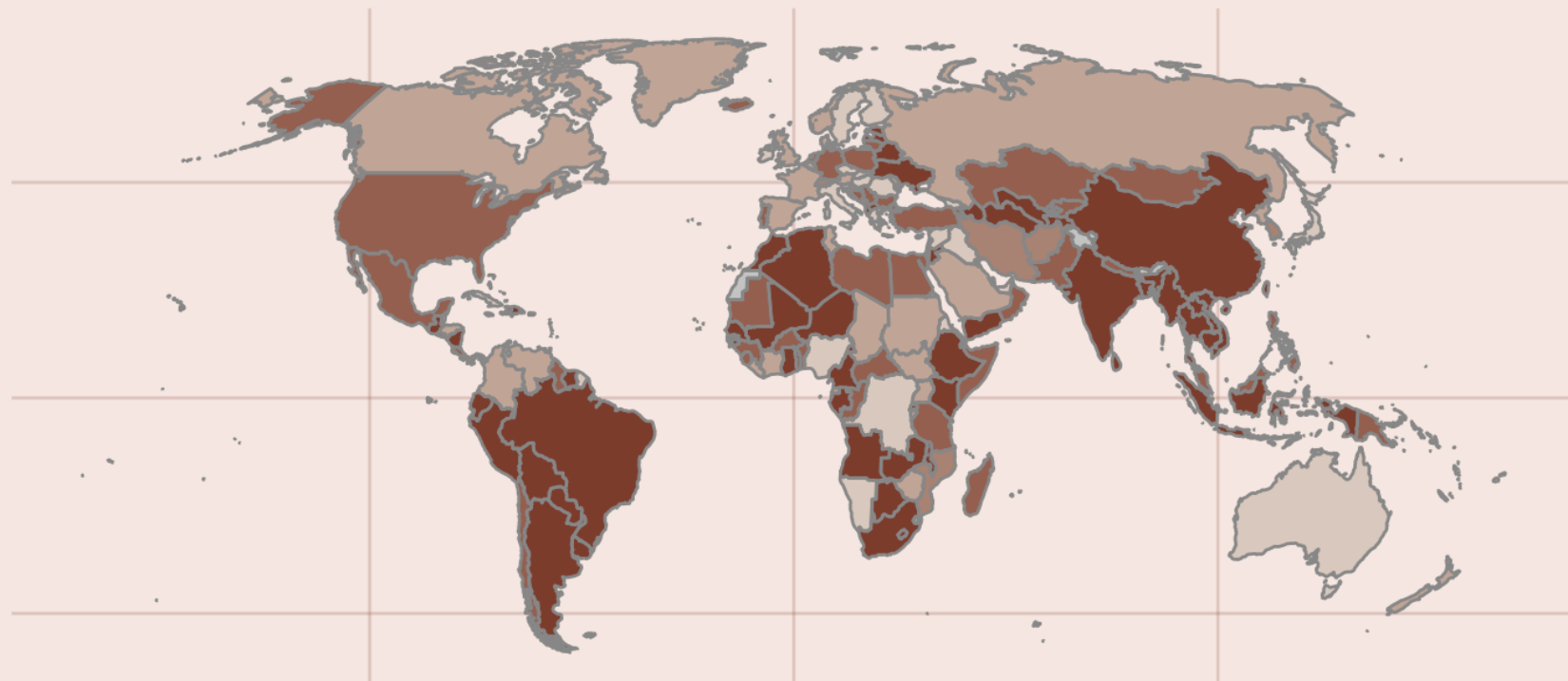



Sources: FAO, Statistics Division (FAOSTAT) and World Bank (WDI). 

Latin America: food production per capita

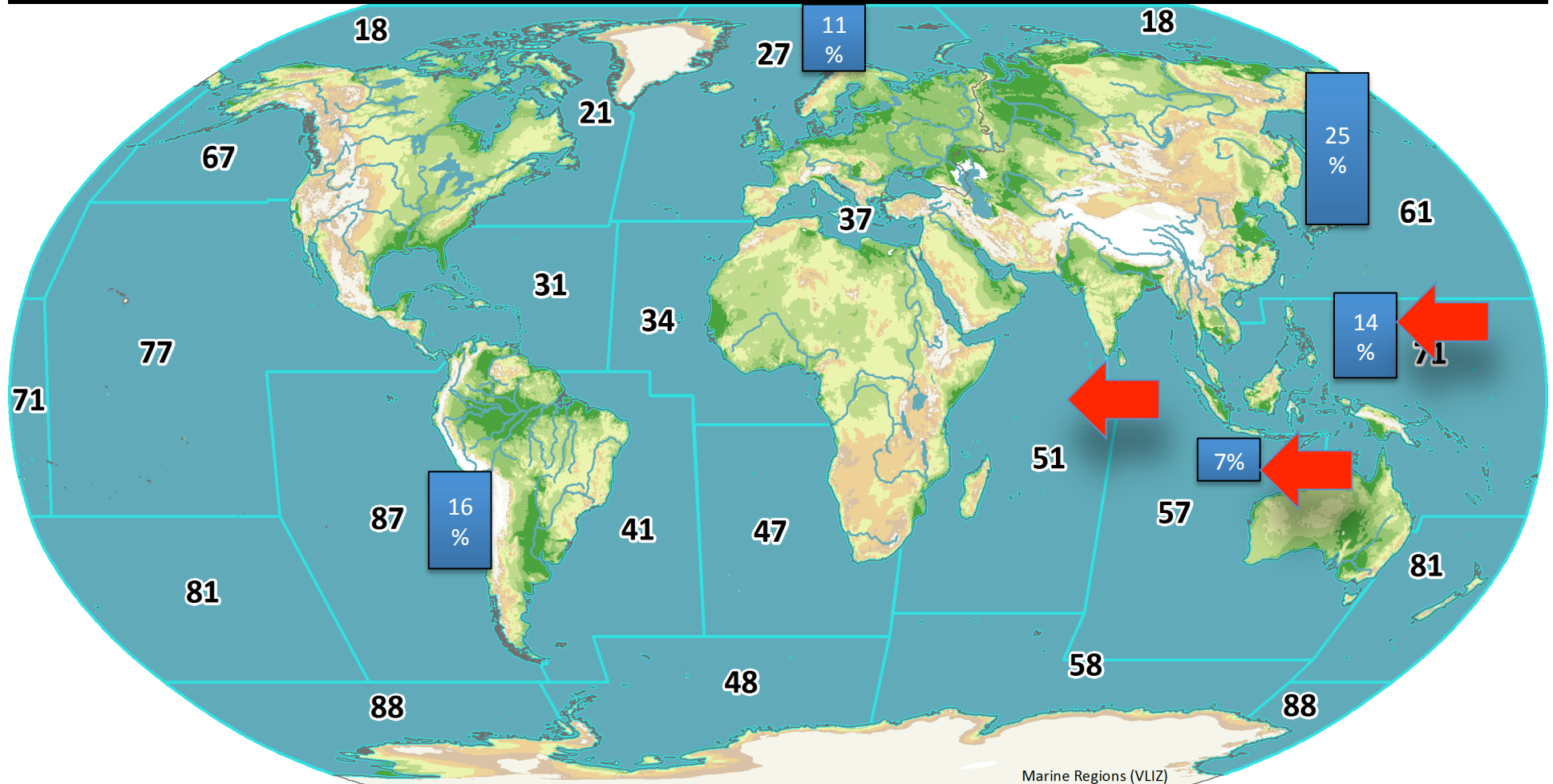
MAP 33: Food, gross per capita production (2004-2006 = 100) (index, 2010)

No data available 31.87 ~ < 94 94 ~ < 99 99 ~ < 100 100 ~ < 110 110 ~ 185.2



Source: FAO, Statistics Division (FAOSTAT). 

Latin America: share of world fish catch

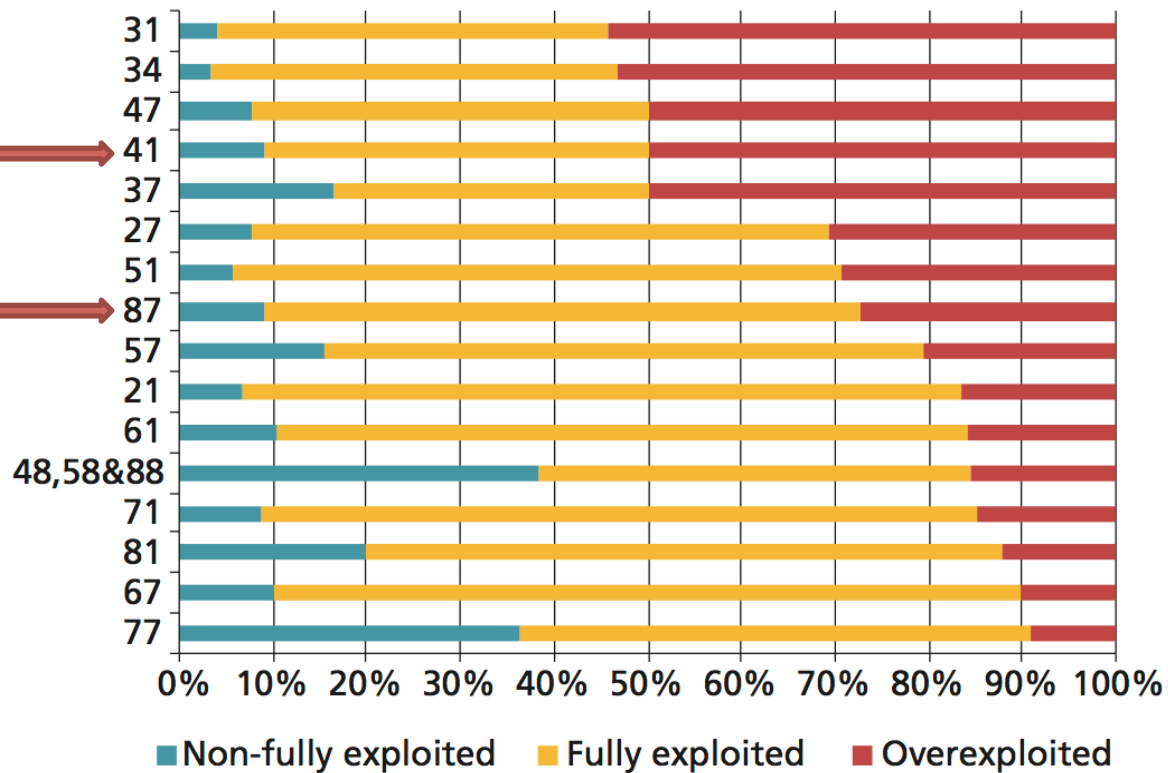


← **FAO Statistical Areas showing an increasing trend in fish landings**

FAO, percentages of worldwide fish catches y fishing zone, average 2006-2011

Latin America: fisheries potential

FIGURE A12
Percentages of fish stocks in different status by
major fishing areas in 2009



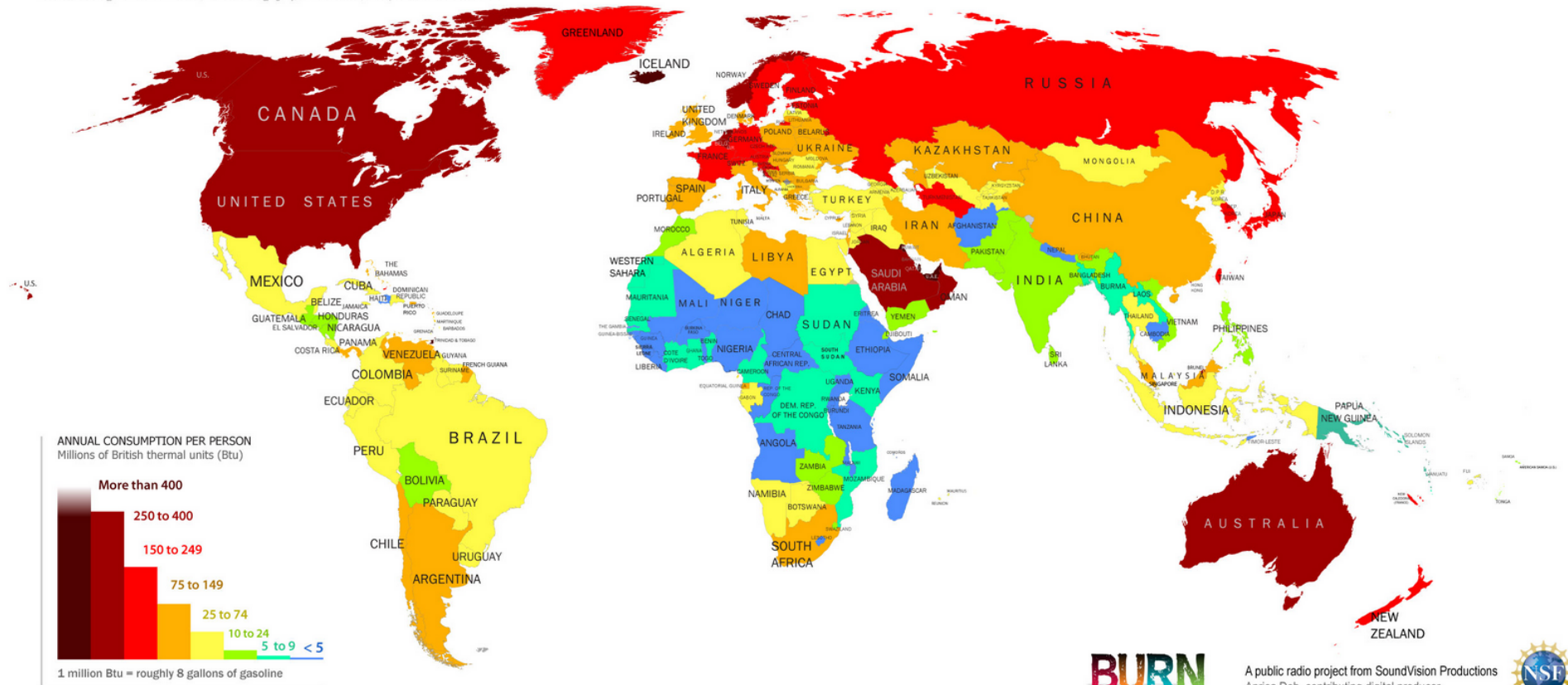
- Area 31 (Atlantic, Western Central)
- Area 34 (Atlantic, Eastern Central)
- Area 47 (Atlantic, Southeast)
- Area 41 (Atlantic, Southwest)
- Area 37 (Mediterranean and Black Sea)
- Area 27 (Atlantic, Northeast)
- Area 51 (Indian Ocean, Western)
- Area 87 (Pacific, Southeast)
- Area 57 (Indian Ocean, Eastern)
- Area 21 (Atlantic, Northwest)
- Area 61 (Pacific, Northwest)
- ...
- Area 71 (Pacific, Western Central)
- Area 81 (Pacific, Southwest)
- Area 67 (Pacific, Northeast)
- Area 77 (Pacific, Eastern Central)

Latin America: energy consumption

Energy consumption per capita (2010)

Energy Consumption Per Person, by country, 2010.

SOURCES: U.S. Energy Information Administration, International Energy Agency, CIA World Factbook, U.N. Dep't of Economics and Social Affairs



BURN
an energy journal

A public radio project from SoundVision Productions
Anrica Deb, contributing digital producer

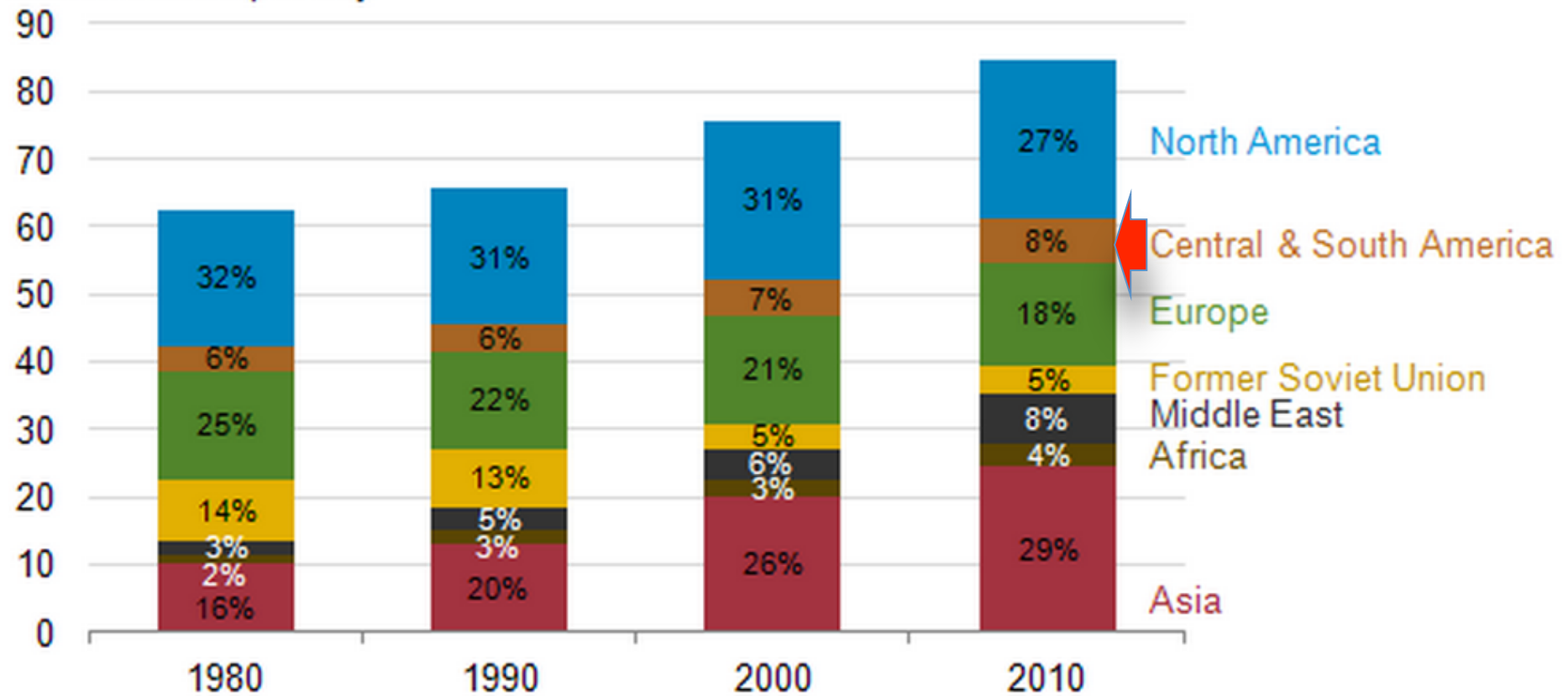


Latin America: oil consumption



World petroleum consumption by region, 1980-2010

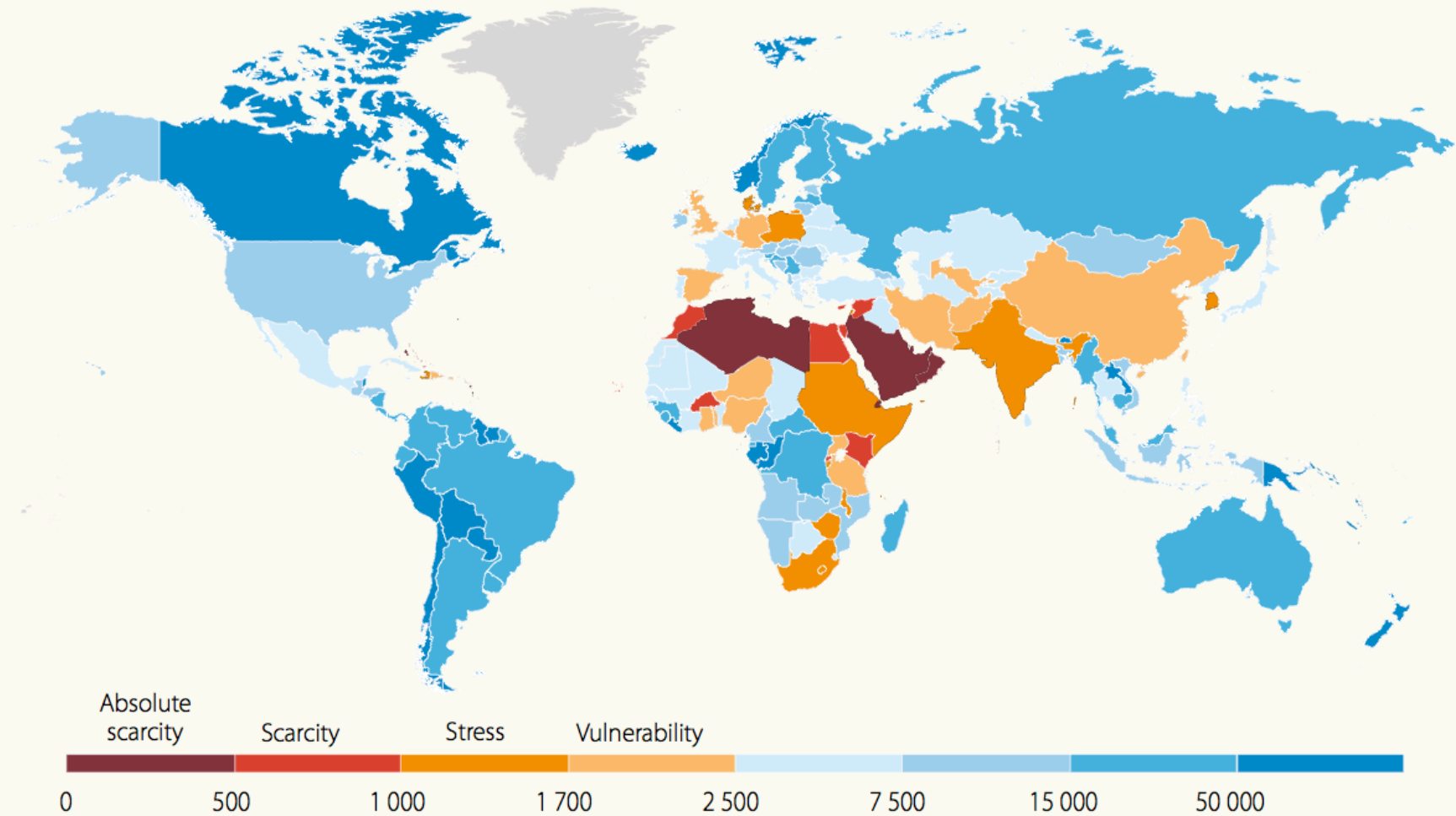
million barrels per day



Source: U.S. Energy Information Administration, [International Energy Statistics](#).

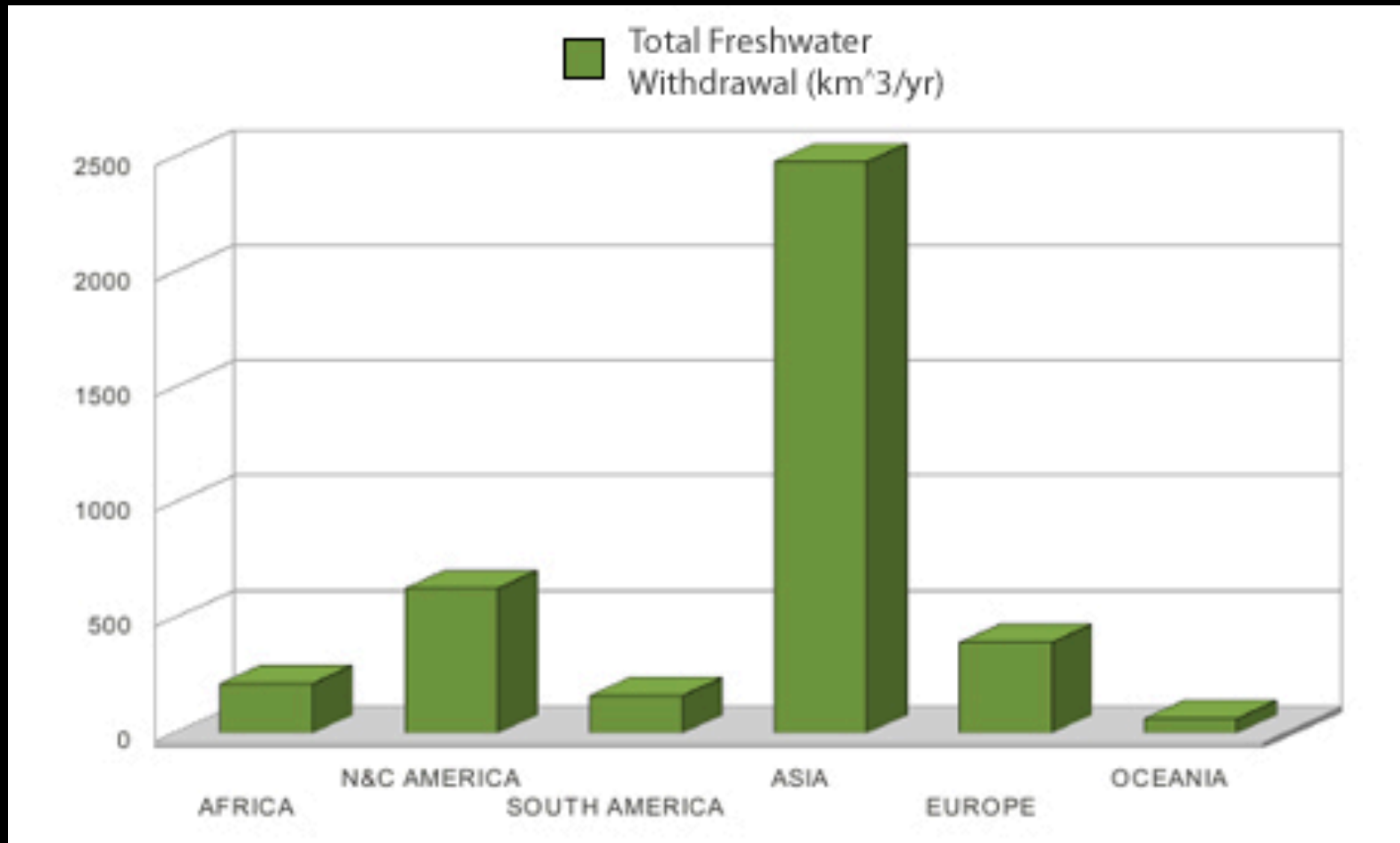
Latin America: water availability

Total renewable water resources, 2011 (m³ per capita per year)



Source: WWAP, prepared with data from FAO AQUASTAT (aggregate data for all countries except Andorra and Serbia, external data) (website accessed Oct 2013), and using UN-Water category thresholds.

América Latina: water consumption



Fuente: Banco Mundial (WDI 2010).

Elaborado por Sensor Networks, http://www.libelium.com/libelium-images/agua_valencia/graficas_consumo_grande.jpg

Latin America: a favourable situation

- Diversity of diversities: adaptation capacity, resilience
 - Diversity of ecosystems
 - Diversity of mineral, land and forestry resources
 - Diversity of cultures and ethnical groups... but largely with a similar history and language
- Social learning processes: rejection of violence and authoritarianism (¿slow but steady?)
- Infrastructure flexibility: no lock-in, limited path dependency; possibility of avoiding *convergence* ideology?
- Latin America has favorable material conditions to confront the impact of climate change

Latin America: challenges

- Latin America (South America) could lead transition processes in the 21st century
- To do so, it has to respond to three challenges:
 1. Becoming aware of the change of epoch we are undergoing: understanding and accepting new global context (environmental constraints)
 2. Building and consolidating science and technology capacities: advancing towards the knowledge society
 3. Improving the quality of political leadership: constructing effective, representative and efficient democracies

Latin America: challenges

- Raising awareness: collective reflection; long term perspective; willingness to question premises and idea of "convergence"; maintaining achievements; discarding conceptual ballast (change mindsets; new conceptions of progress and development)
- Creation and consolidation of science, technology and innovation capacities: investments in knowledge, scientific and technological literacy; overcoming the three "I"s: indifference, ignorance incompetence
- Construction of democratic societies: freedom, openness and transparency; participation, inclusion and solidarity