World Forum on Urban Forests
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Changing Global Urban Tree Cover and Benefits

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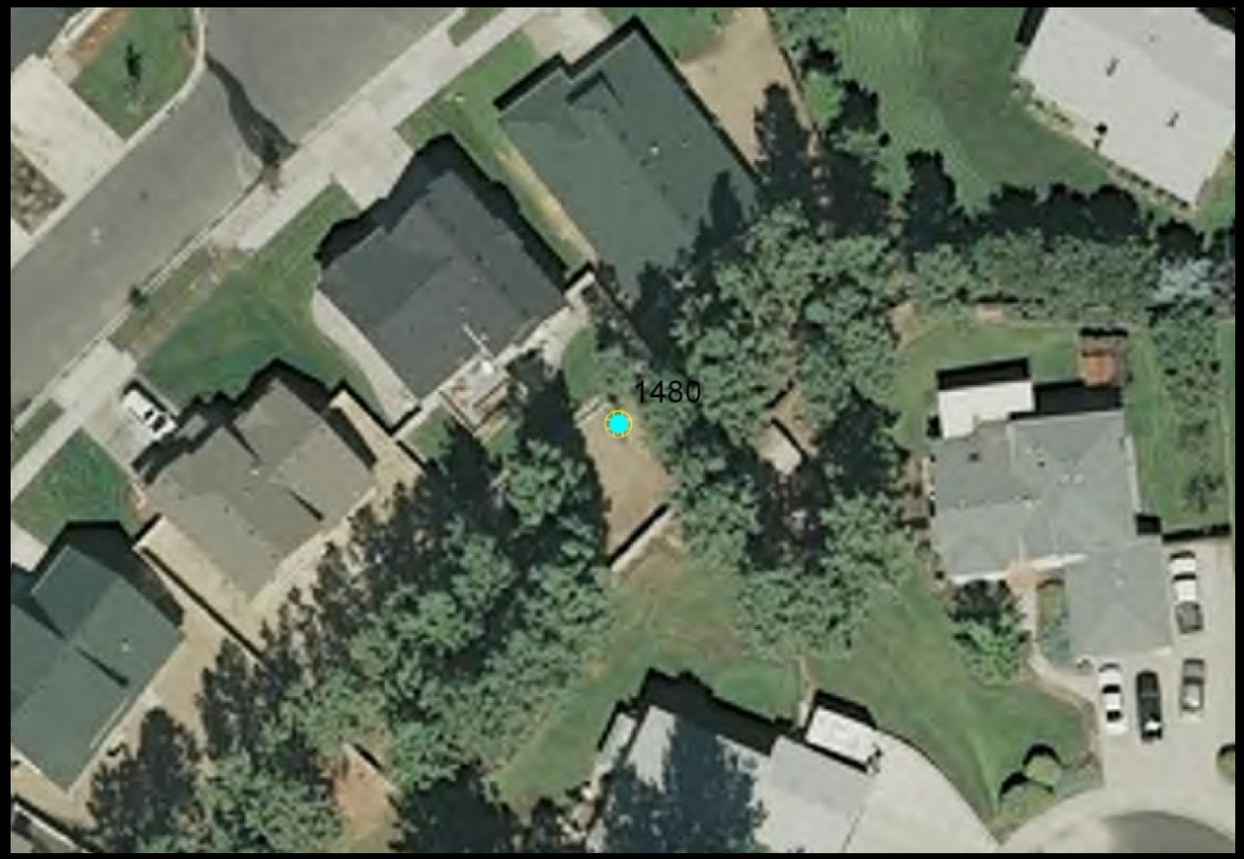
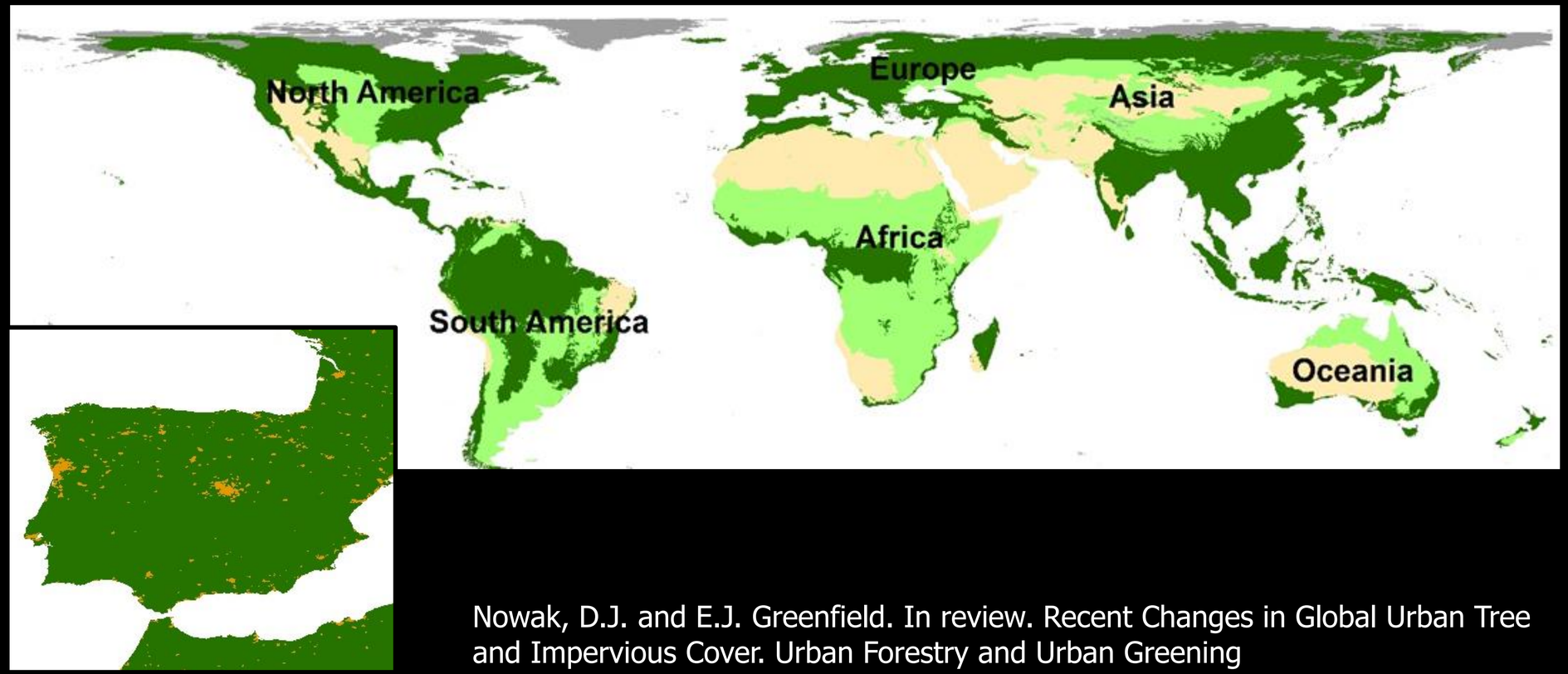
Global Urban Tree Cover Change

- Paired image analysis



Global Urban Tree Cover Change

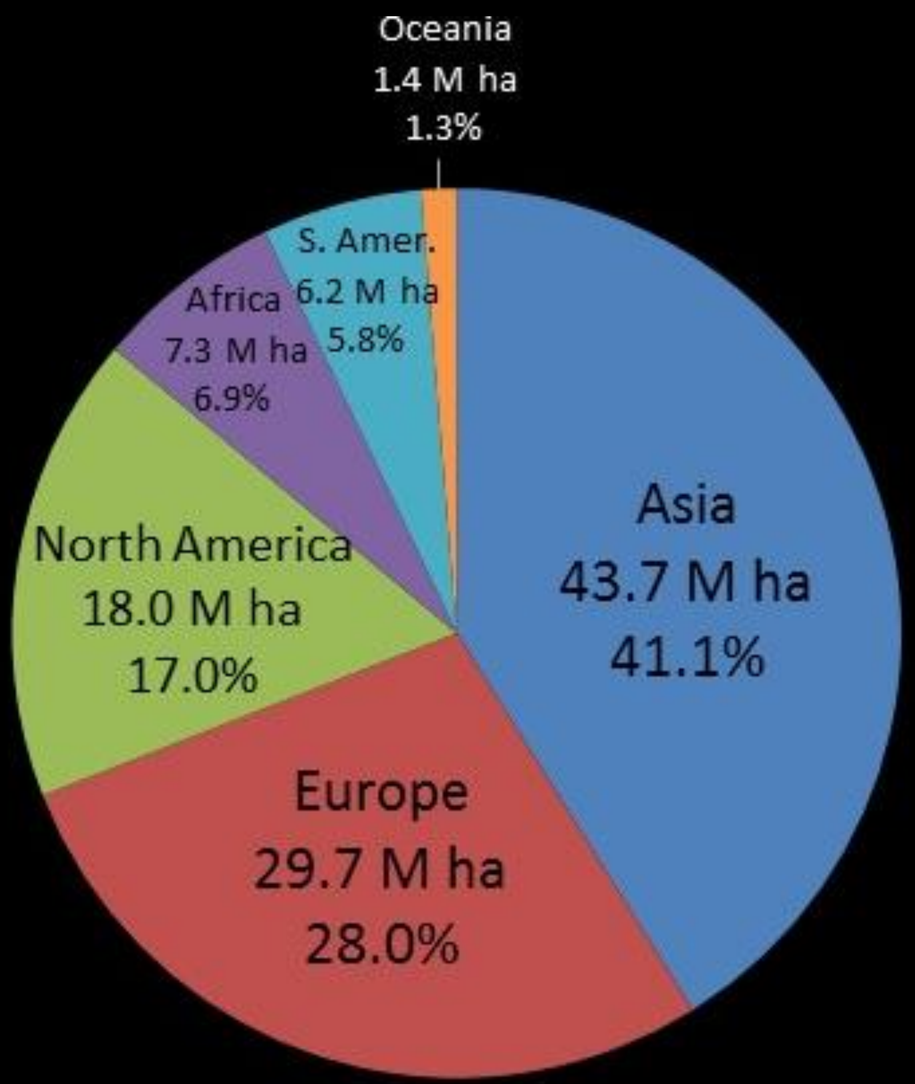
- Satellite-defined urban (2001-2010)
  - built environment >50%
- PI: 7,341 paired points (c. 2012 and 2017)



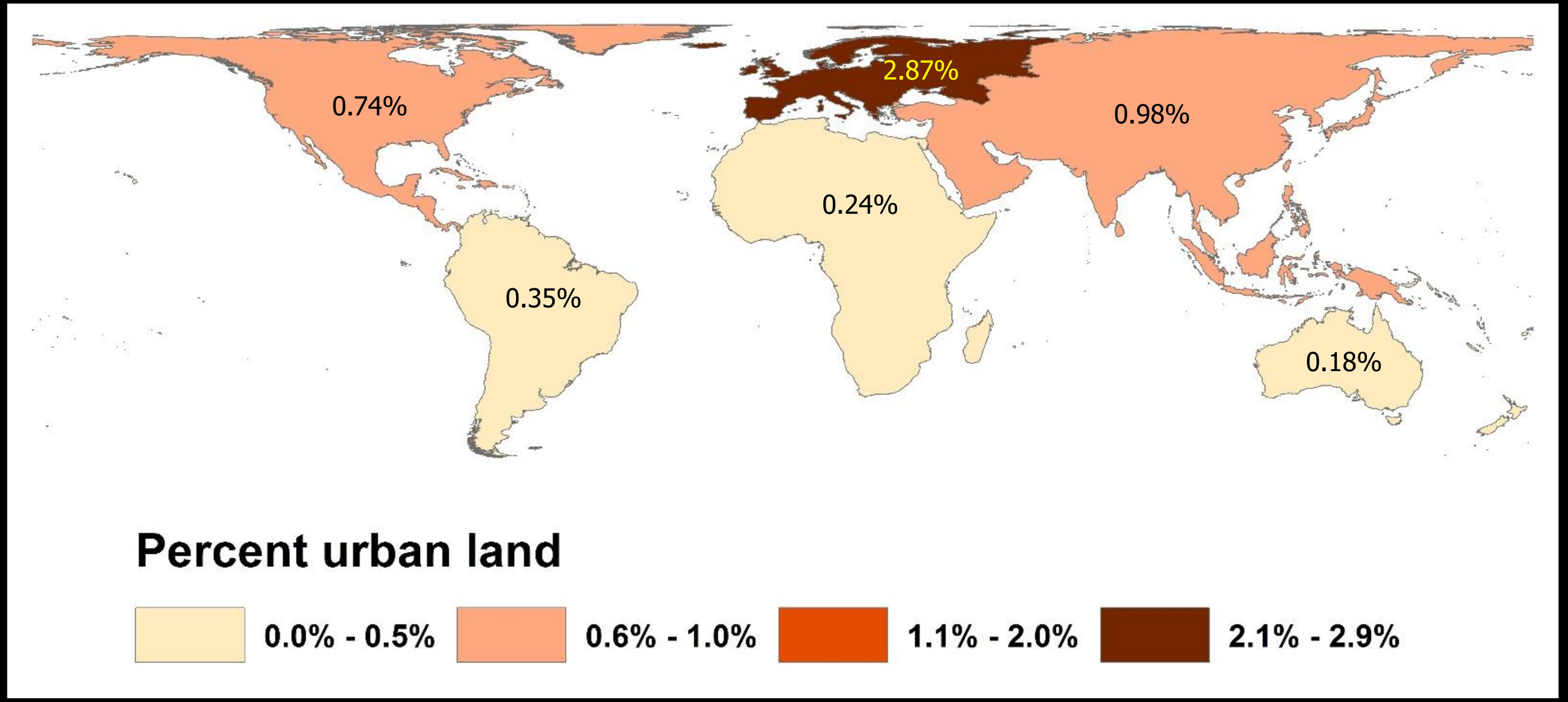
Nowak, D.J. and E.J. Greenfield. In review. Recent Changes in Global Urban Tree and Impervious Cover. Urban Forestry and Urban Greening

Urban Land

- 106 Million hectares

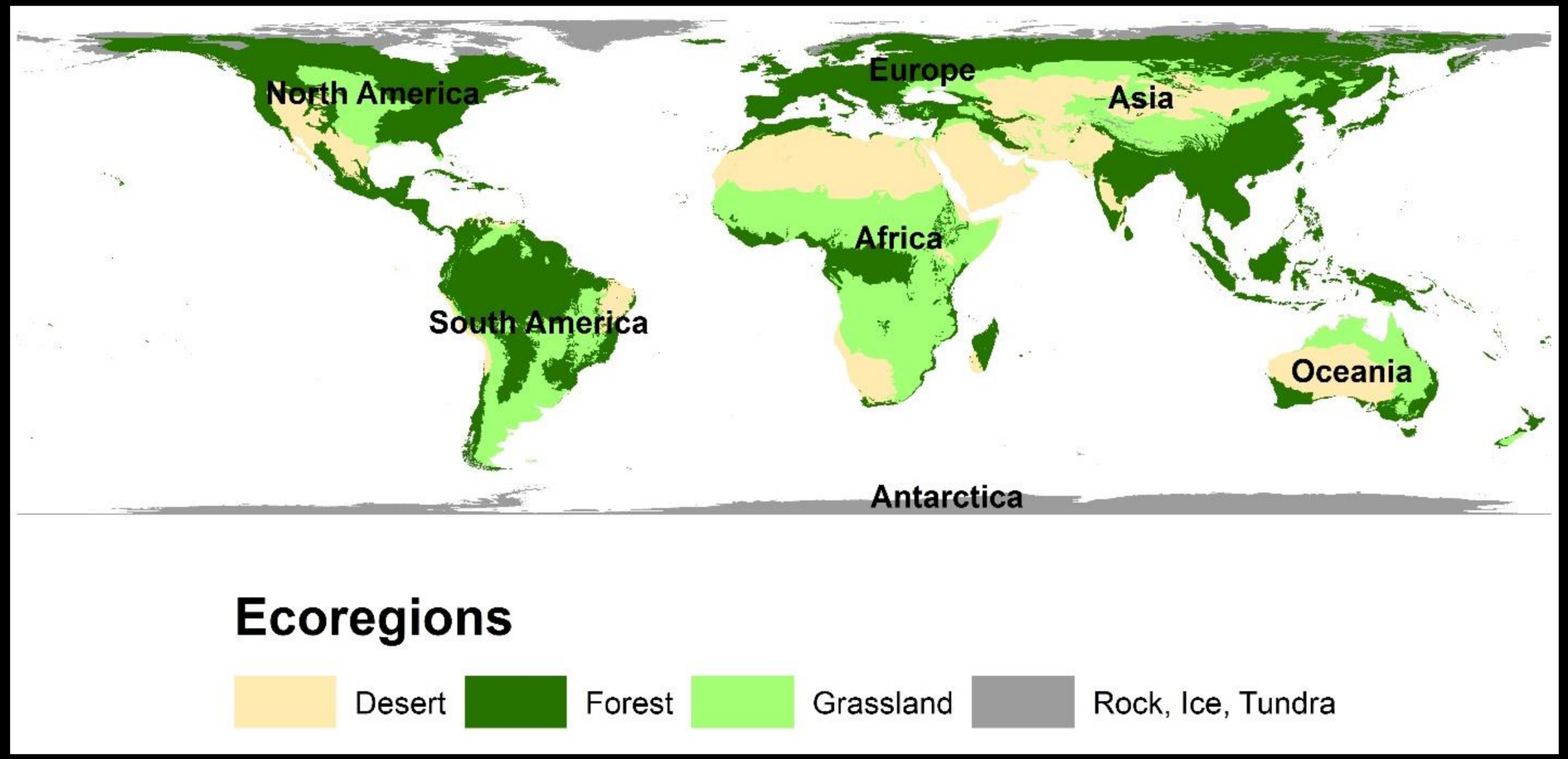


Urban Land



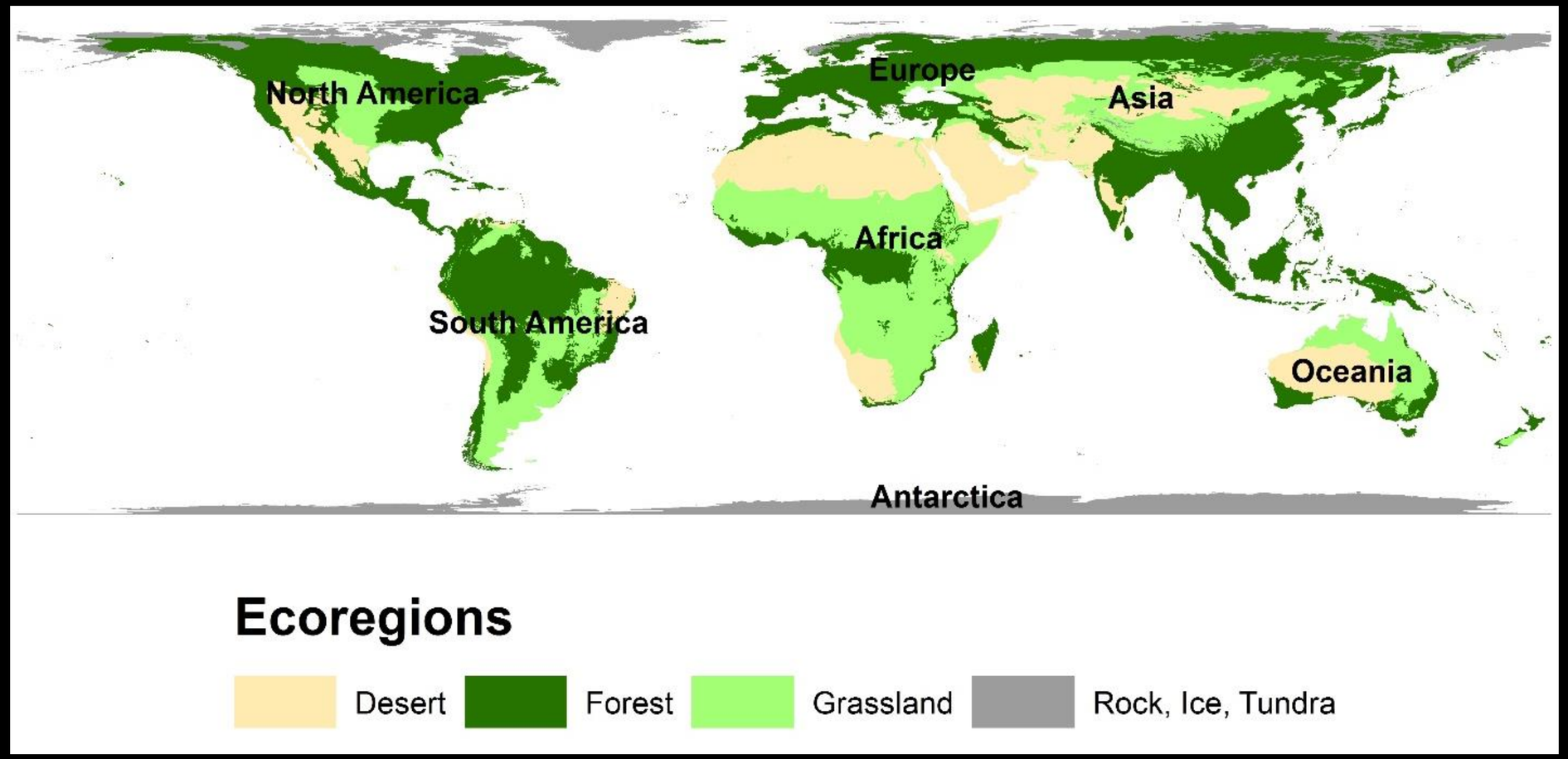
Global Average = 0.71%

Ecoregion Effect



Urban Tree Cover by Ecoregion

Ecoregion Effect



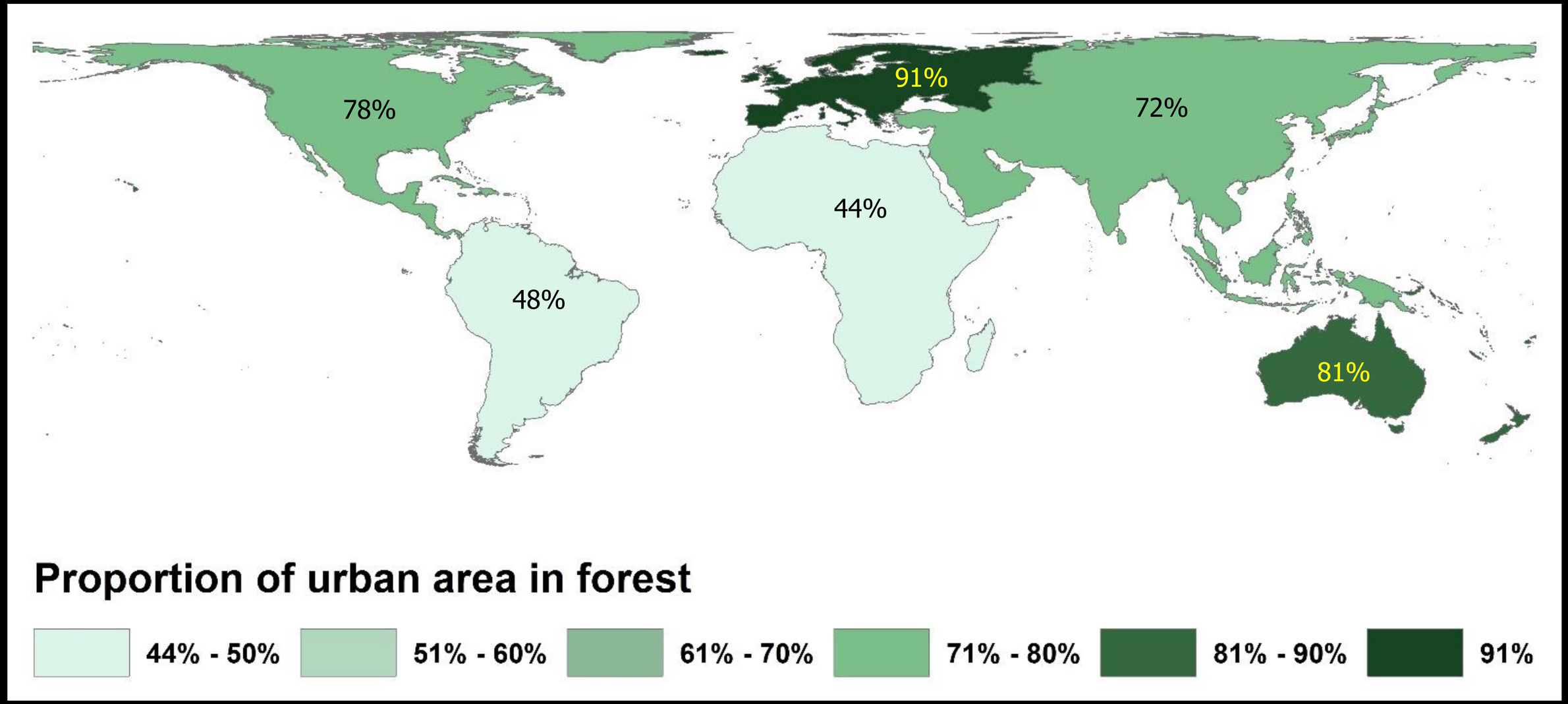
Urban Tree Cover by Ecoregion

Forests = 30.4%

Grassland = 18.2%

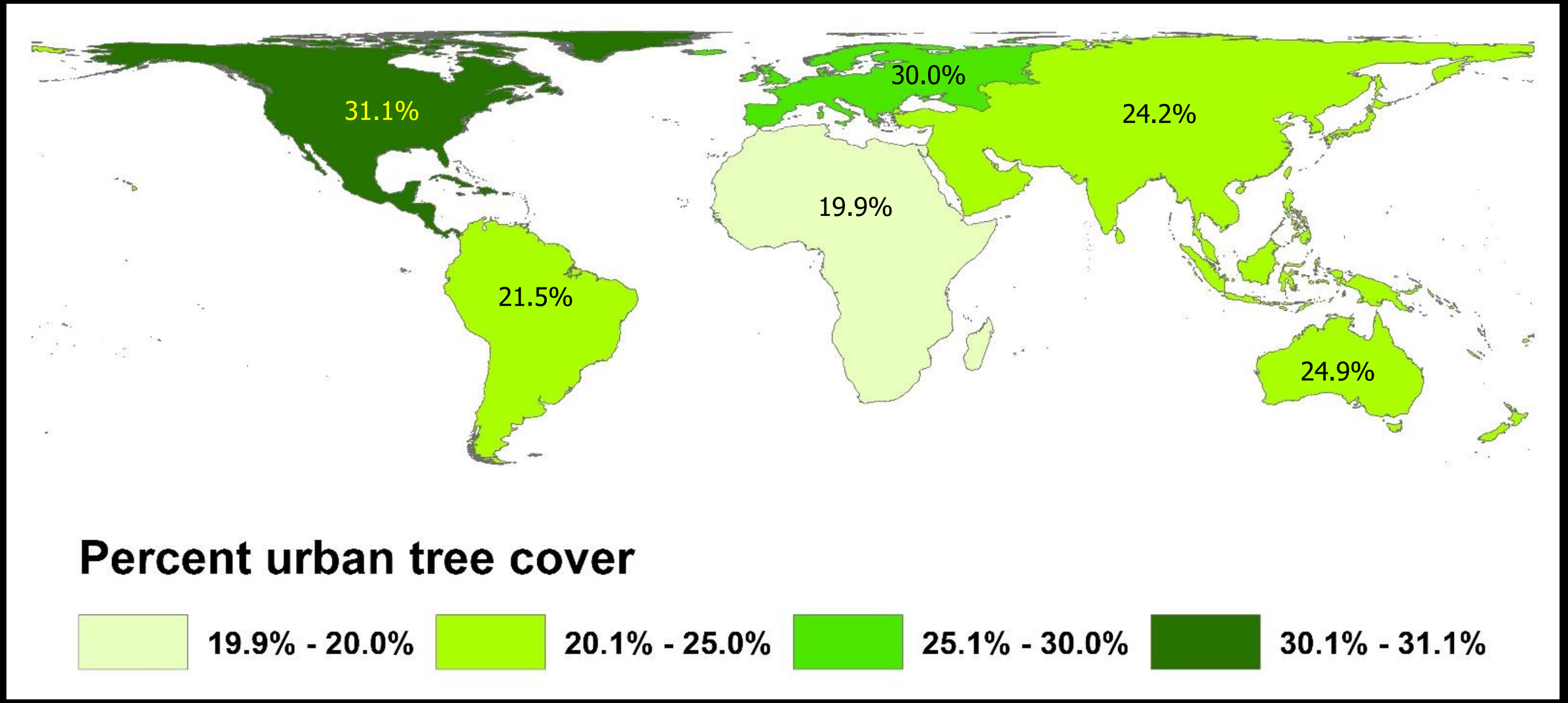
Deserts = 12.0%

Forested Regions



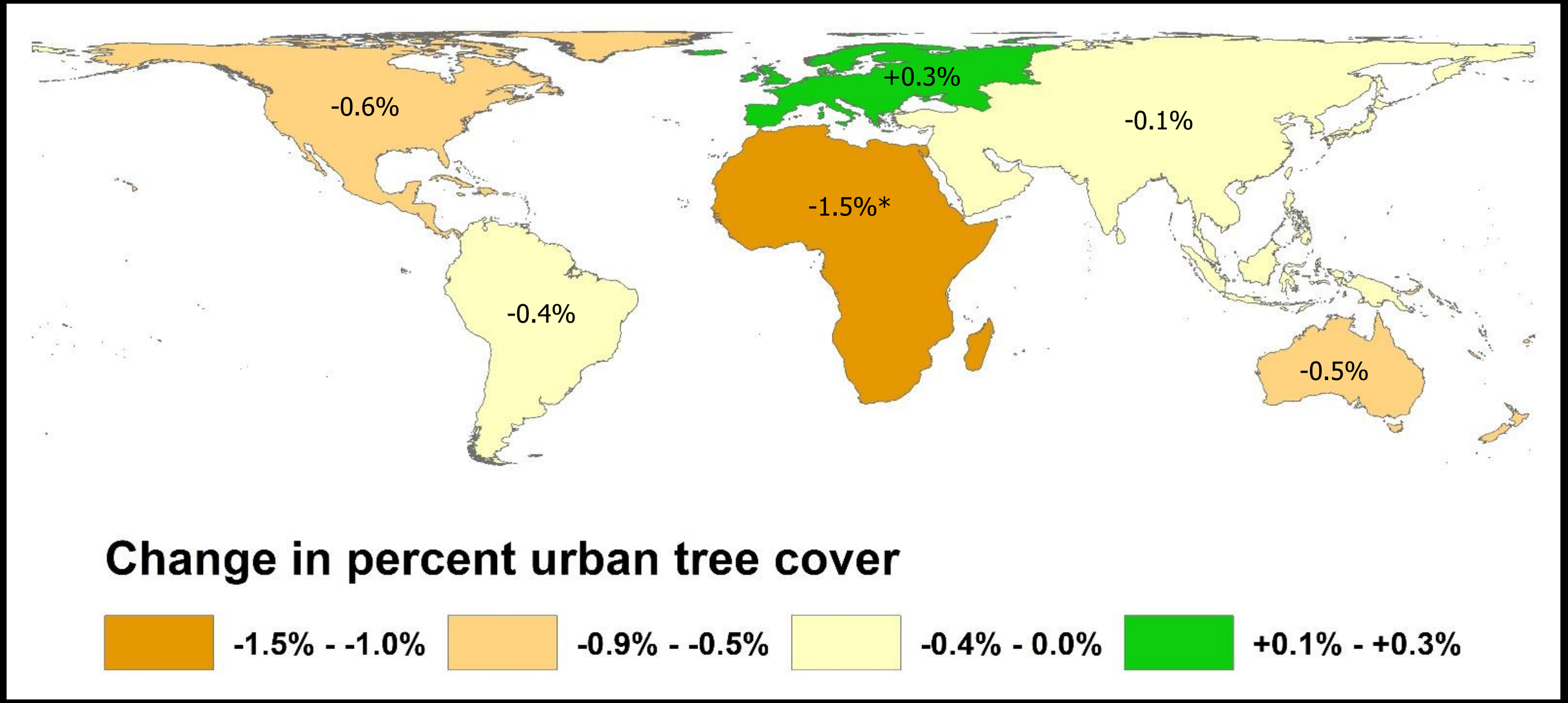
Global Average = 75%

Continental Differences



Global Average = 26.5%

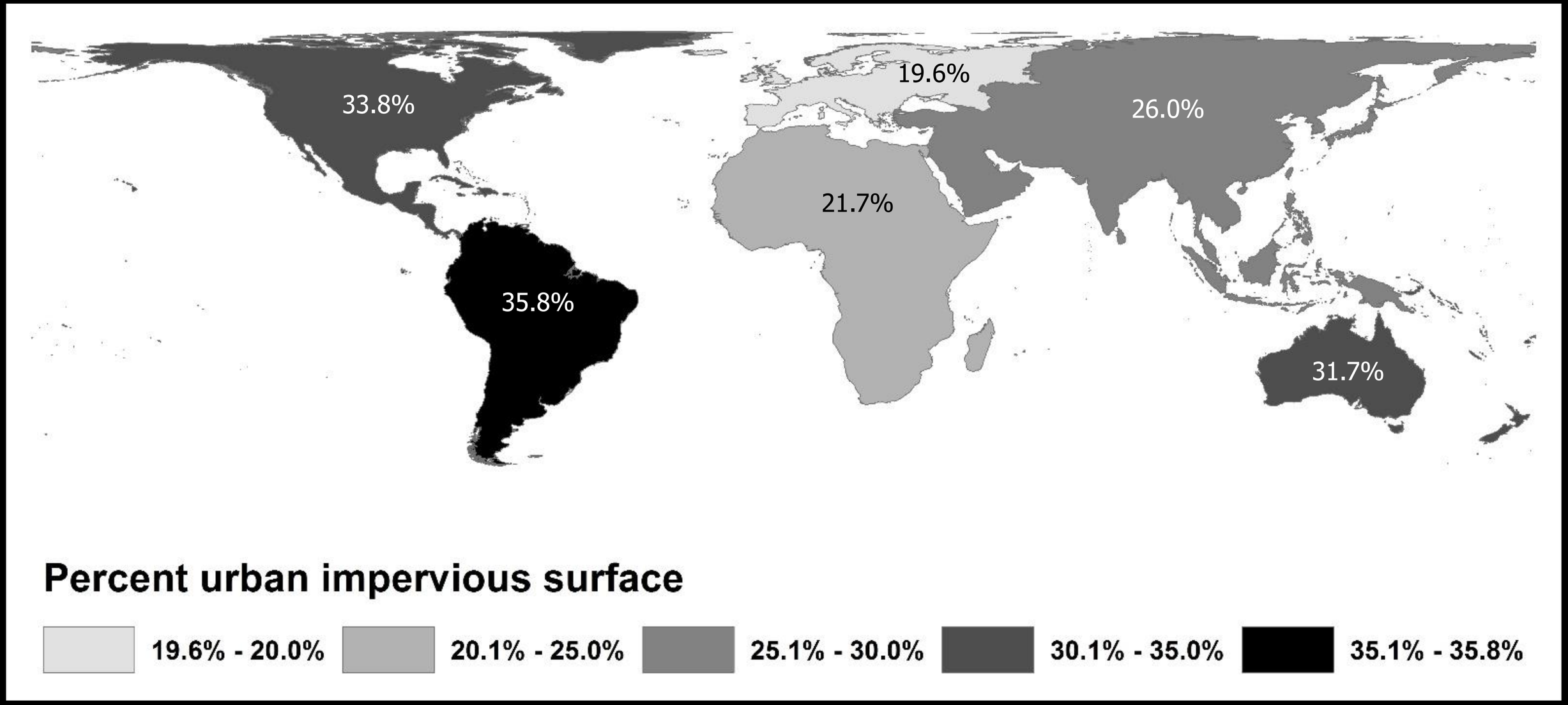
Change in Urban Tree Cover (2012-2017)



Global Average = -0.2%*

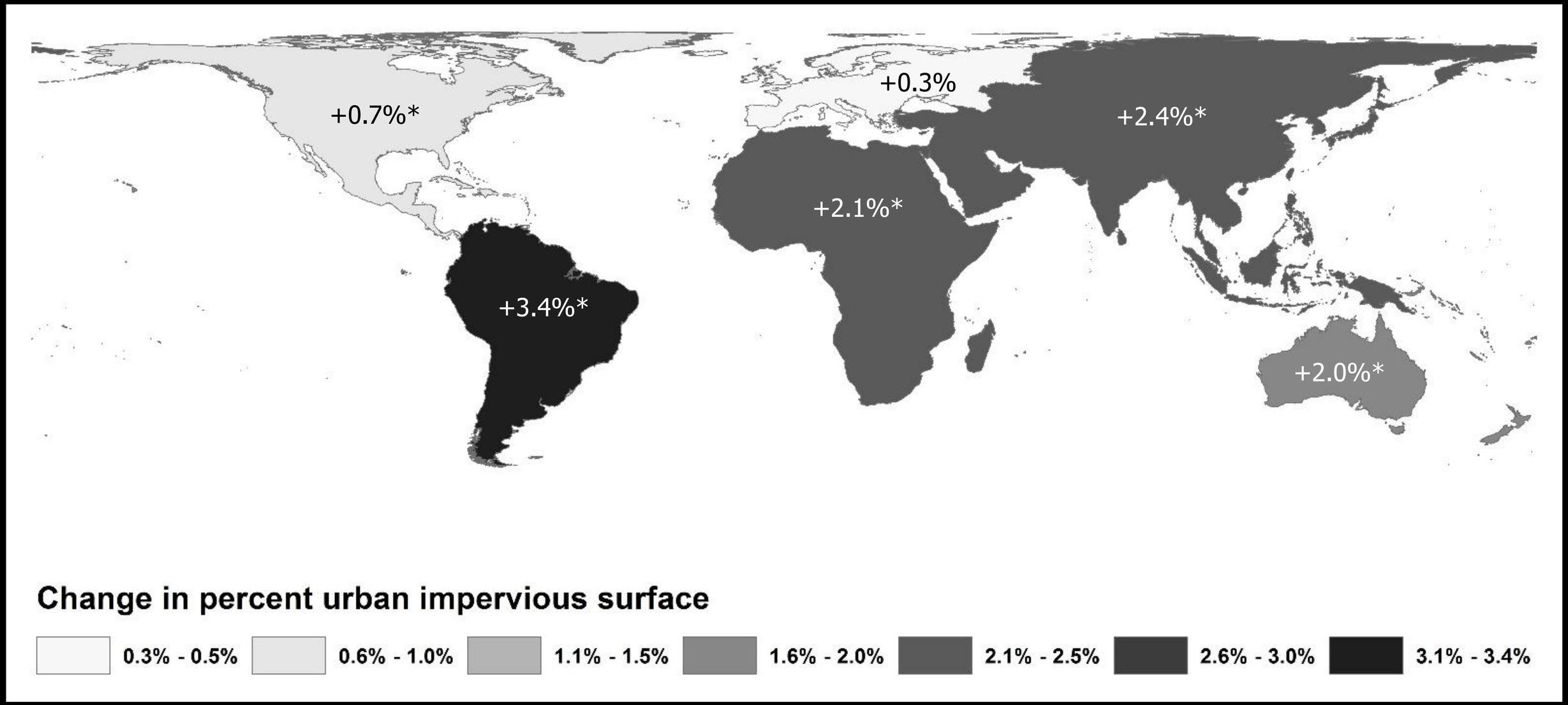
* Statistically significant change

Urban Impervious Cover



Global Average = 25.9%

Change in Urban Impervious Cover (2012-2017)



Global Average = +1.6%*

* Statistically significant change

Global Urban Forest Summary

- Urban tree cover (%): 26.5
- Urban tree cover (ha): 28 million
- Total annual benefits: $48 billion*
- Urban tree cover change (2012-2017): - 0.2%
  - -40,000 ha tree cover / year
- Annual loss in benefits: $72 million*
- Urban impervious cover (%): 25.9
- Urban impervious cover change (2012-2017): +1.6%
  - +326,000 ha impervious cover / year

* Assumes comparable benefits per hectare of tree cover as found in the US


Thank You
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