



RETHINKING URBAN SUSTAINABILITY: INTEGRATING ECOLOGY IN CITY RANKING MODELS

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Abstract

In an era of accelerating ecological collapse, cities are increasingly evaluated through sustainability rankings that claim to measure environmental resilience for the future. However, these rankings prioritize anthropocentric infrastructure metrics while failing to adequately assess ecological integrity. My Independent Study research critiques traditional sustainability ranking models and introduces the Viability Index for Ecologically Sustainable and Thriving Urban Areas (VISTA) model, an alternative framework that centers ecological integrity rather than economic privilege. Findings show that urban sustainability is not the achievement of a single indicator but a balance of interconnected ecological systems. This research ultimately argues that true sustainability cannot be measured by human convenience alone but must instead reflect a city’s ability to function as part of a larger ecosystem, ensuring the survival of both urban and nonhuman systems in an era of profound environmental disaster.

Theoretical Principles

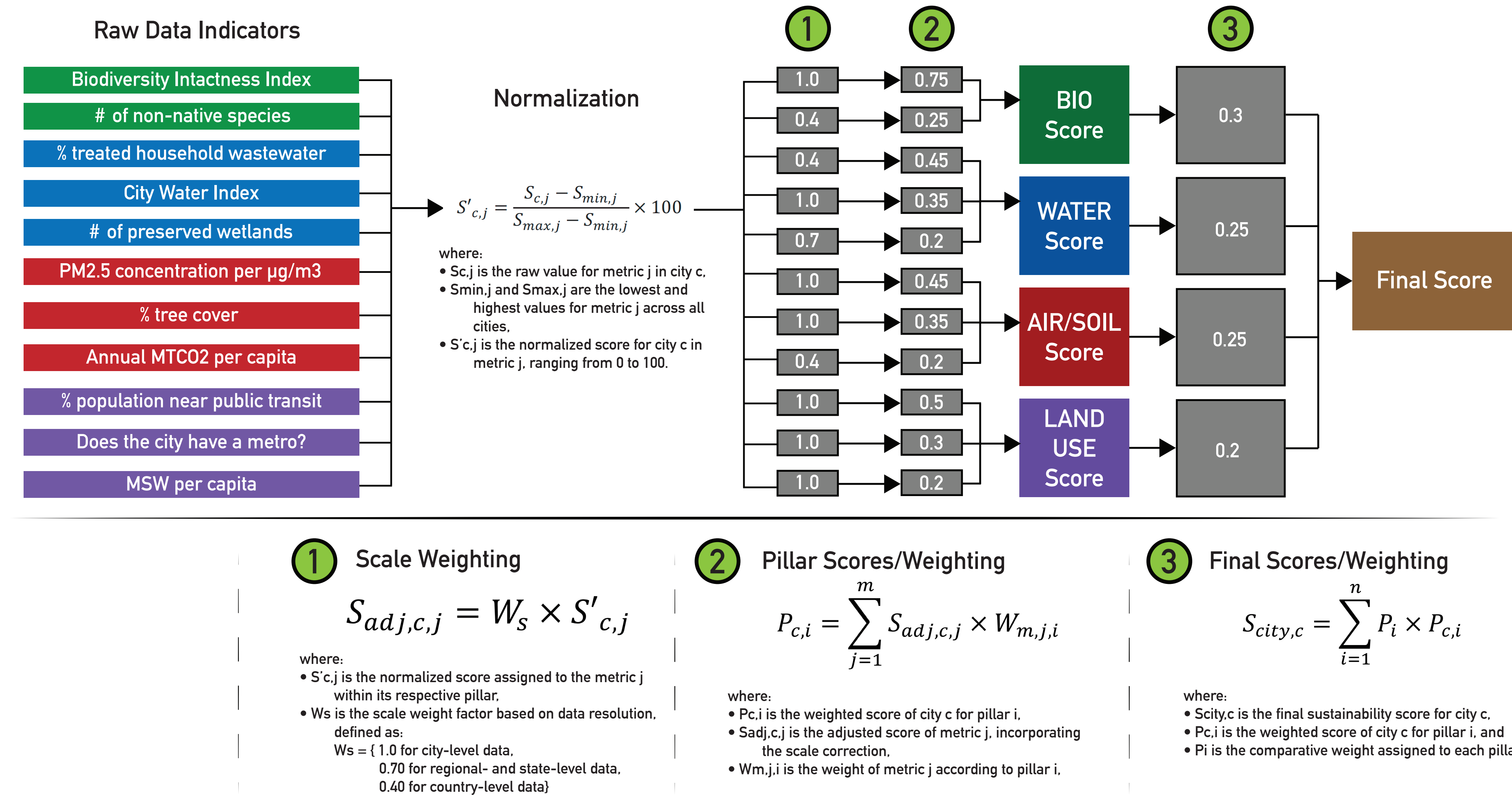
- Ecological Urbanism-**
- 1. Prioritizing ecological health
 - 2. Resilient infrastructure

- Eco-Cities-**
- 1. Compact/efficient design
 - 2. Bio-centric priorities

- Nature-based Solutions-**
- 1. Restoration/conservation
 - 2. Green infrastucture
 - 3. Human/nature co-benefits

- Transit-Oriented Development-**
- 1. Mixed-use development
 - 2. Green mobility
 - 3. Reduced car dependency

Methodology - VISTA Model



VISTA Final Rankings

1. Copenhagen	11. Kunming	21. London	31. Kathmandu	41. Dushanbe
2. Melbourne	12. Frankfurt	22. Antwerp	32. Marrakech	42. Chennai
3. Santiago	13. Calgary	23. Buenos Aires	33. São Paulo	43. Donetsk
4. Riyadh	14. Paris	24. Baku	34. Bangkok	44. Hanoi
5. Lisbon	15. Miami	25. Seville	35. Amman	45. Trujillo
6. Sofia	16. Naples	26. Pune	36. Łódź	46. Jakarta
7. Istanbul	17. Manila	27. Algiers	37. Dakar	47. Phnom Penh
8. Medellín	18. Mexico City	28. Seoul	38. Accra	48. Moscow
9. Abu Dhabi	19. Muscat	29. Los Angeles	39. Cairo	49. Mombasa
10. Madrid	20. Cape Town	30. Dallas	40. Philidelphia	50. Addis Ababa
				51. Lahore

Comparative Rankings

VISTA	VISTA + HDI	SAFE	ARCADIS	GDS	IESE
Copenhagen	Copenhagen	Helsinki	Amsterdam	Helsinki	London
Melbourne	Melbourne	Vienna	Rotterdam	Gothenburg	New York City
Santiago	Riyadh	Stockholm	Copenhagen	Copenhagen	Paris
Riyadh	Abu Dhabi	Nagoya	Frankfurt	Bergen	Tokyo
Lisbon	Lisbon	Osaka	Munich	Aarhus	Berlin
Sofia	Santiago	Tokyo	Oslo	Bordeaux	Singapore
Istanbul	Frankfurt	Sydney	Hamburg	Singapore	Oslo
Medellín	Istanbul	Vancouver	Berlin	Oslo	Amsterdam
Abu Dhabi	Madrid	Copenhagen	Warsaw	Belfast	San Francisco
Madrid	Calgary	Paris	London	Sydney	Chicago
Number of Cities		106	100	>100	183
Common cities with VISTA		38	39	Unknown	32

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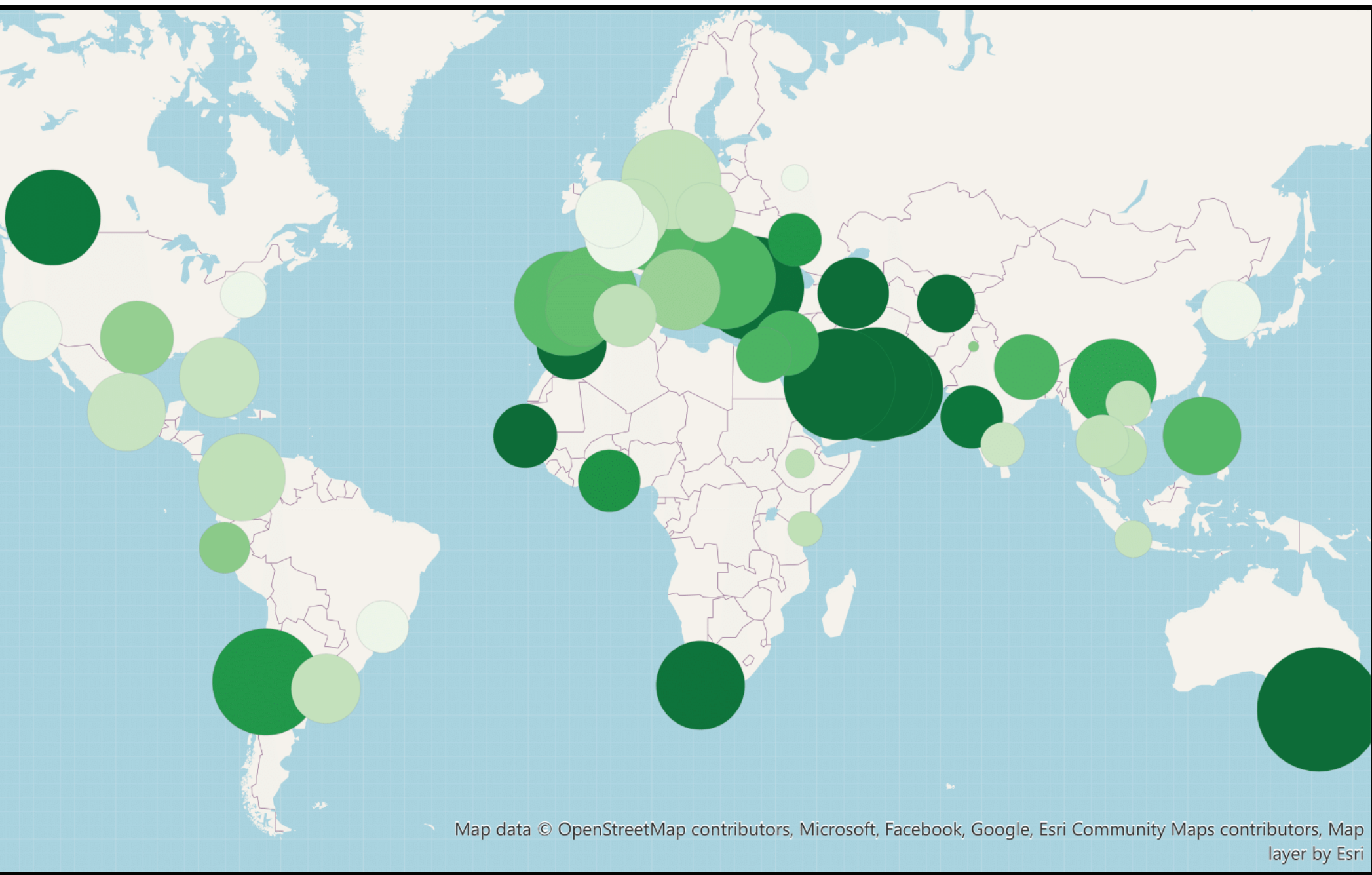
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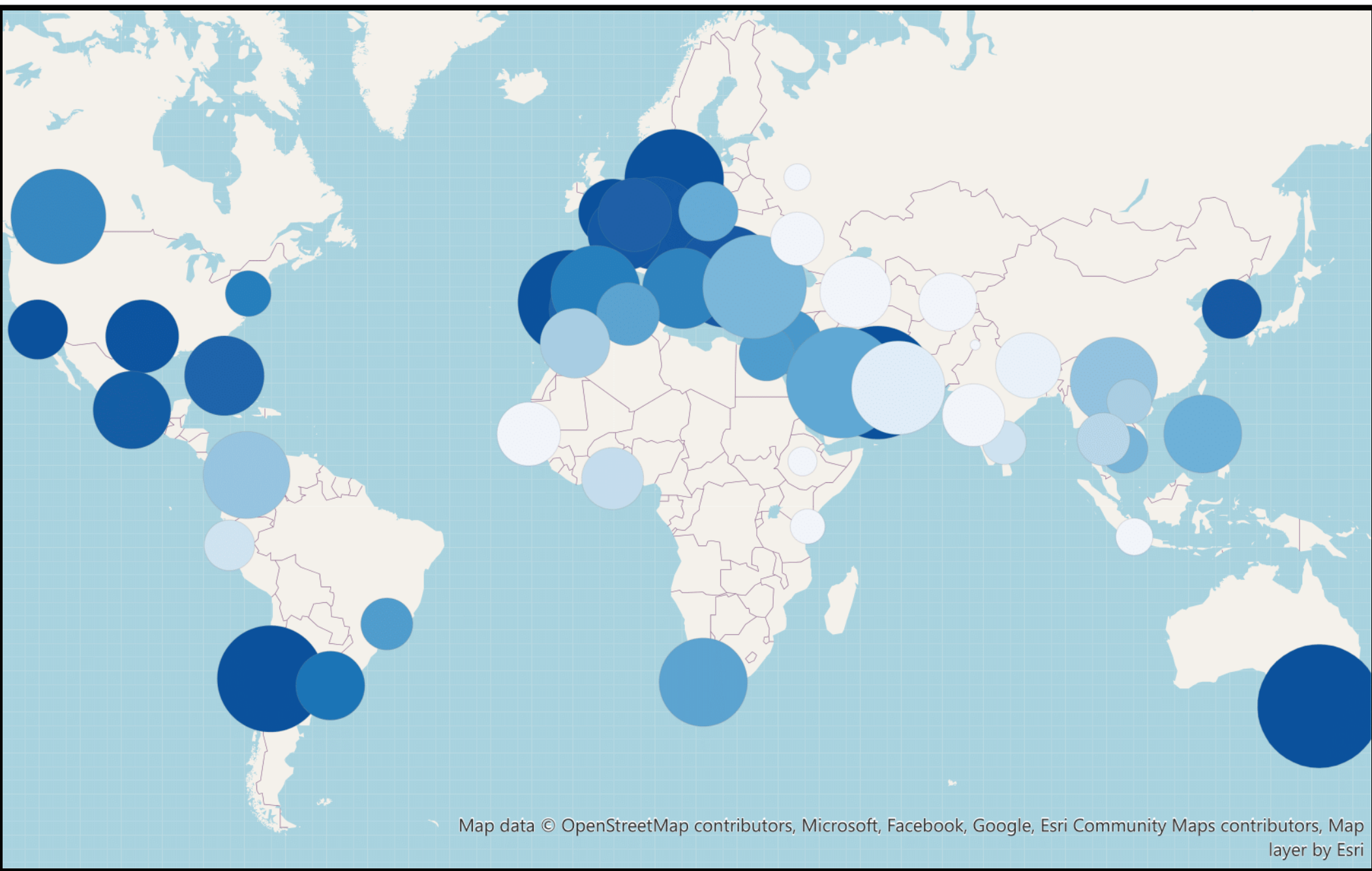
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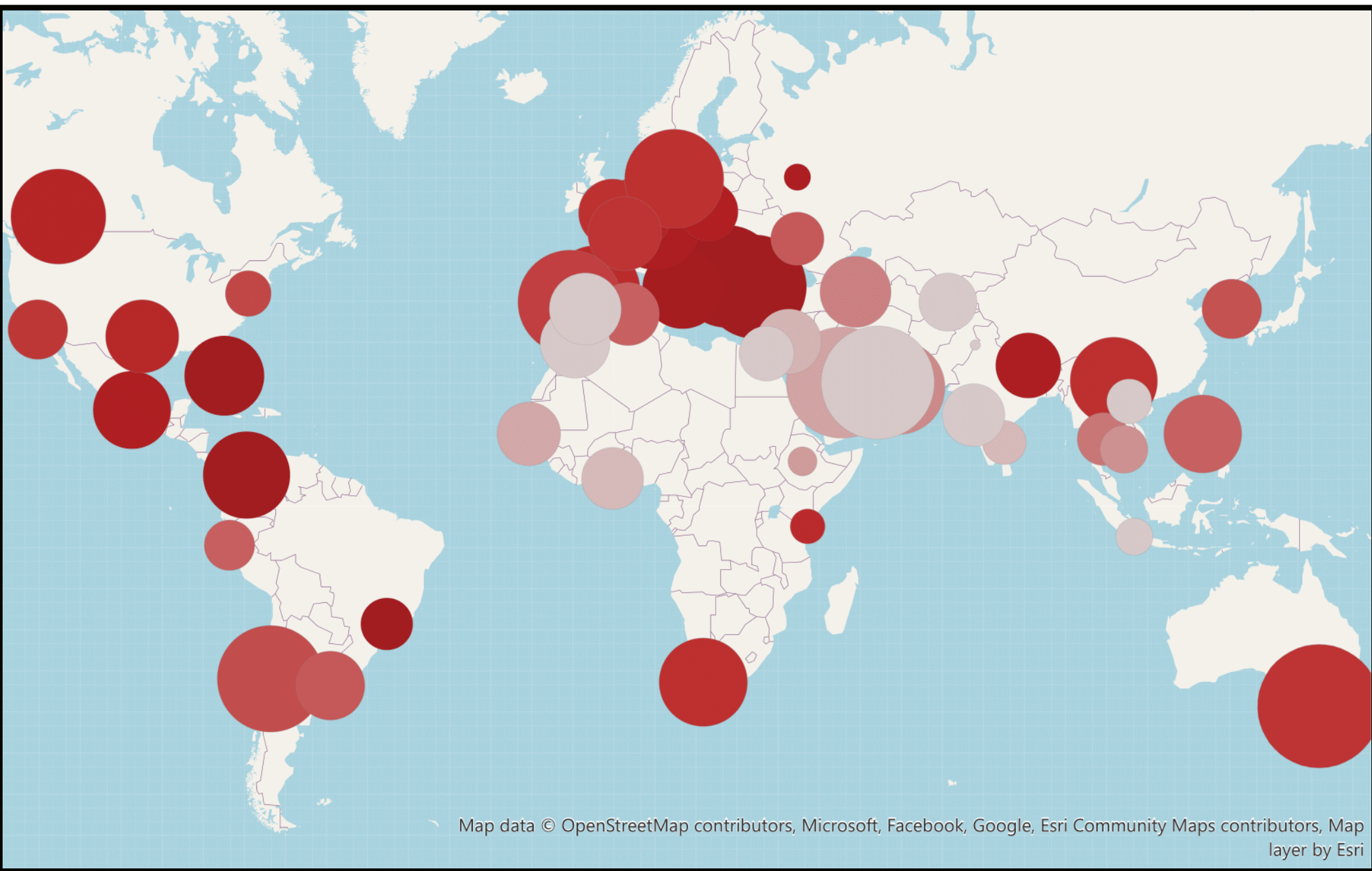
Biodiversity:



Water Health:



Air/Soil Health:



Land Use and Transportation:

