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Recent Trends in the Demography of Developed Countries

Sigurd Dyrting

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The Demographic Transition

POPULATION

WARREN S. THOMPSON
Miami University

ABSTRACT

There are three types of countries in the world today as regards their population growth. *Group A.*—These countries have a very rapidly declining birth-rate, and although their death-rates are low their rates of natural increase are declining and they are rapidly approaching a stationary or decreasing population because of the general practice of conception control. *Group B.*—Birth-rates are coming under control in these countries, but rather slowly. Death-rates are declining more rapidly than birth-rates, however, so that natural increase is rising or at least is not declining to any great extent. *Group C.*—In these countries both birth-rates and death-rates are subject to little voluntary control as yet and the positive checks determine the growth of population. *Land for expansion.*—The land needed for the expansion of the peoples now entering upon a period of rapid population growth (practically all of those in Group B and some of those in Group C) is practically all being held by the peoples in Group A, who no longer have an expanding population to settle these lands. One of the most urgent problems of the next few decades is going to be the readjustment in land holdings demanded by this shift in the expanding peoples from northwestern Europe to eastern and southern Europe and to certain parts of Asia.

Thompson, 1929

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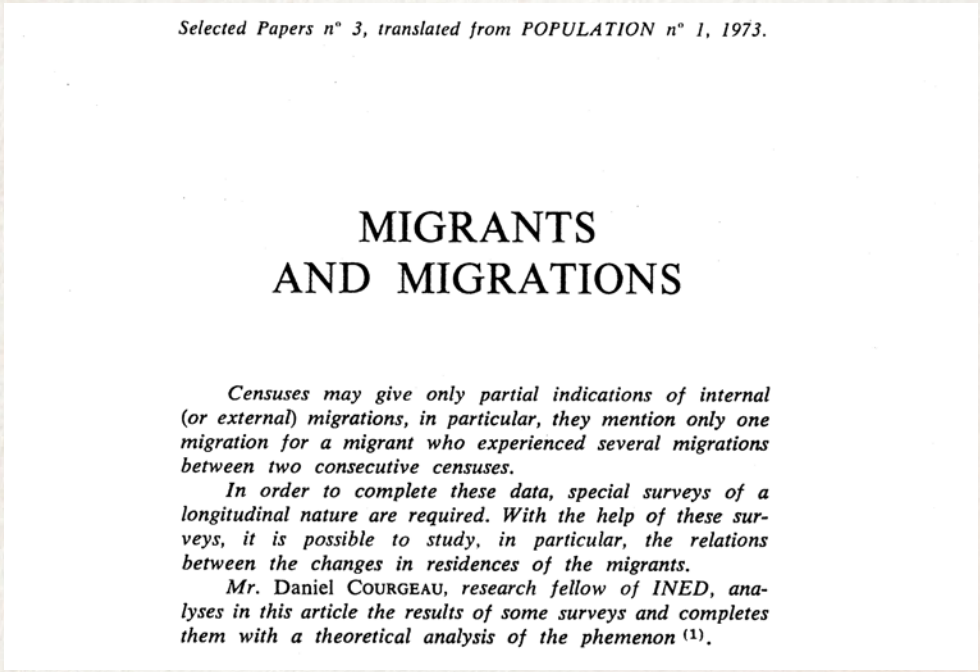
Migration: Movers and Stayers



Selected Papers n° 3, translated from POPULATION n° 1, 1973.

MIGRANTS AND MIGRATIONS

Censuses may give only partial indications of internal (or external) migrations, in particular, they mention only one migration for a migrant who experienced several migrations between two consecutive censuses.

In order to complete these data, special surveys of a longitudinal nature are required. With the help of these surveys, it is possible to study, in particular, the relations between the changes in residences of the migrants.

Mr. Daniel COURGEAU, *research fellow of INED, analyses in this article the results of some surveys and completes them with a theoretical analysis of the phemenon* (1).

Courgeau, 1973

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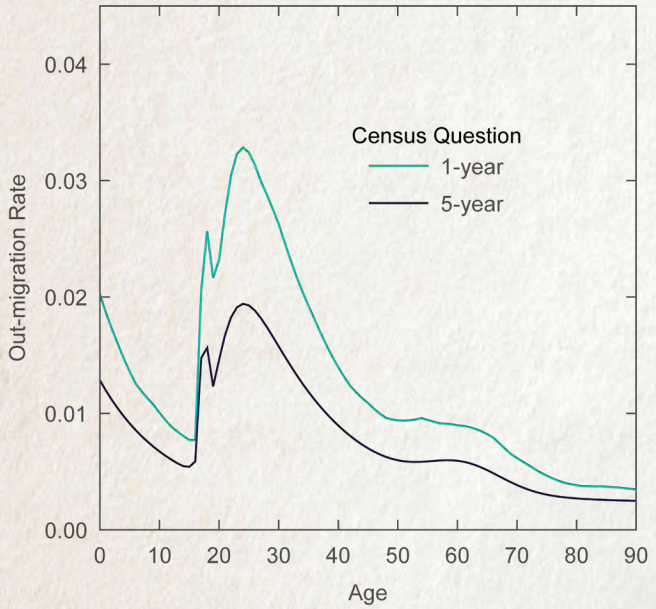
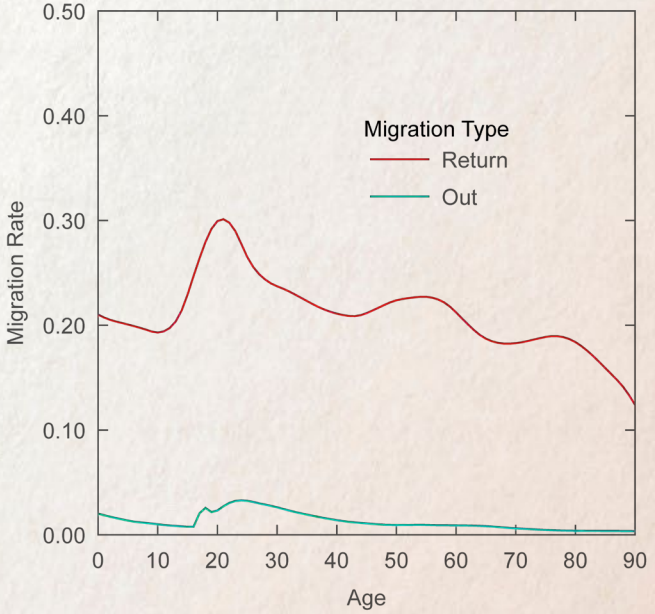
Interstate Moves

Out-migration



Return migration



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Mortality: Compression …

SPECIAL ARTICLE

AGING, NATURAL DEATH, AND THE COMPRESSION OF MORBIDITY

JAMES F. FRIES, M.D.

Abstract The average length of life has risen from 47 to 73 years in this century, but the maximum life span has not increased. Therefore, survival curves have assumed an ever more rectangular form. Eighty per cent of the years of life lost to nontraumatic, premature death have been eliminated, and most premature deaths are now due to the chronic diseases of the later years. Present data allow calculation of the ideal average life span, approximately 85 years. Chronic illness may presumably be postponed by changes in life style, and it has been shown that the physiologic and psychologic markers of aging may be modified. Thus, the average age at first infirmity can be raised, thereby making the morbidity curve more rectangular. Extension of adult vigor far into a fixed life span compresses the period of senescence near the end of life. Health-research strategies to improve the quality of life require careful study of the variability of the phenomena of aging and how they may be modified. (N Engl J Med. 1980; 303:130-5.)

Fries, 1980

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… and Delay

INSIGHT REVIEW NATURE Vol 464 25 March 2010 doi:10.1038/nature08984

Biodemography of human ageing

James W. Vaupel[1,2,3]

Human senescence has been delayed by a decade. This finding, documented in 1994 and bolstered since, is a fundamental discovery about the biology of human ageing, and one with profound implications for individuals, society and the economy. Remarkably, the rate of deterioration with age seems to be constant across individuals and over time: it seems that death is being delayed because people are reaching old age in better health. Research by demographers, epidemiologists and other biomedical researchers suggests that further progress is likely to be made in advancing the frontier of survival — and healthy survival — to even greater ages.

Vaupel, 2010

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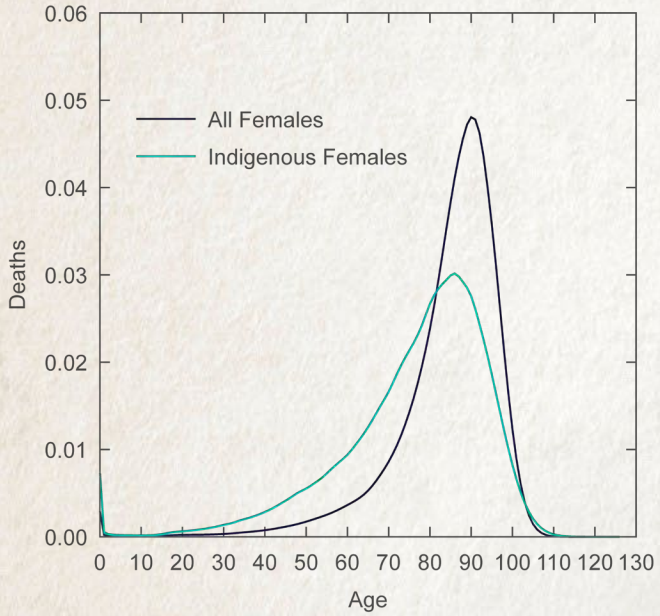
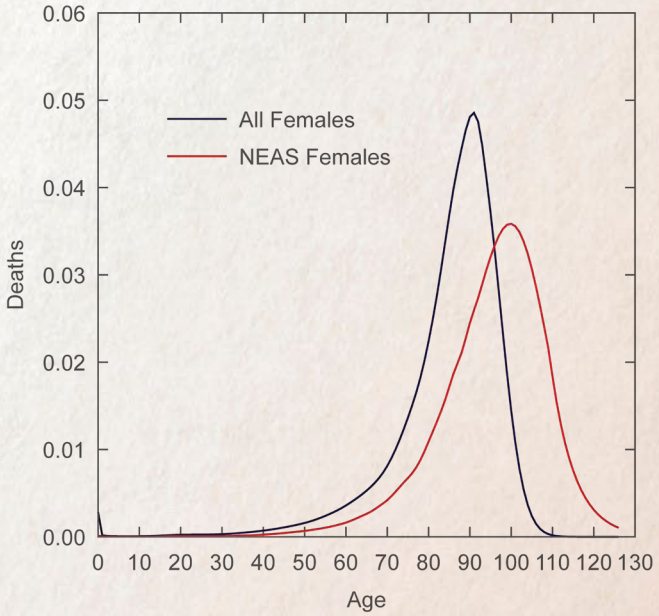
Indigenous and NE Asian Females

Compression



Delay



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Fertility: Early and Delayed

Population Studies, 53 (1999), 317–329
Printed in Great Britain

Recent European fertility patterns: Fitting curves to 'distorted' distributions

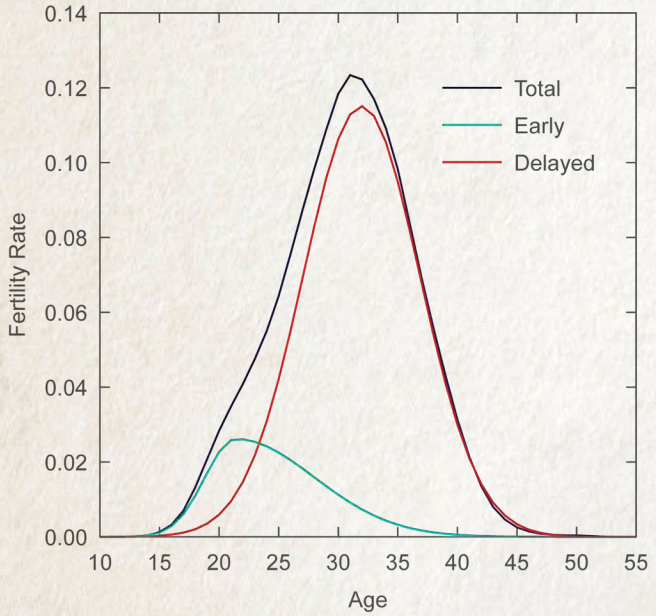
T. CHANDOLA, D. A. COLEMAN, AND R. W. HIORNS

Abstract. Recent patterns of fertility in Europe show marked differences between countries. Recent United Kingdom and Irish fertility curves show 'distortions' in terms of a 'bulge' in early age fertility, distinct from the smoother curves of other European countries. These patterns may not be adequately described by mathematical functions used by previous studies to model fertility curves. A mixture model with two component distributions may be more appropriate. The suitability of the simple and mixture Hadwiger functions is examined in relation to the fertility curves of a number of European countries. While the simple Hadwiger model fits recent period age-specific fertility distributions for some countries, others which display a 'bulge' in early age fertility require a mixture Hadwiger model. Some of the parameters of the Hadwiger models appear to be related to familiar demographic indices. The simple and mixture Hadwiger models appear useful in describing and comparing fertility patterns across European countries.

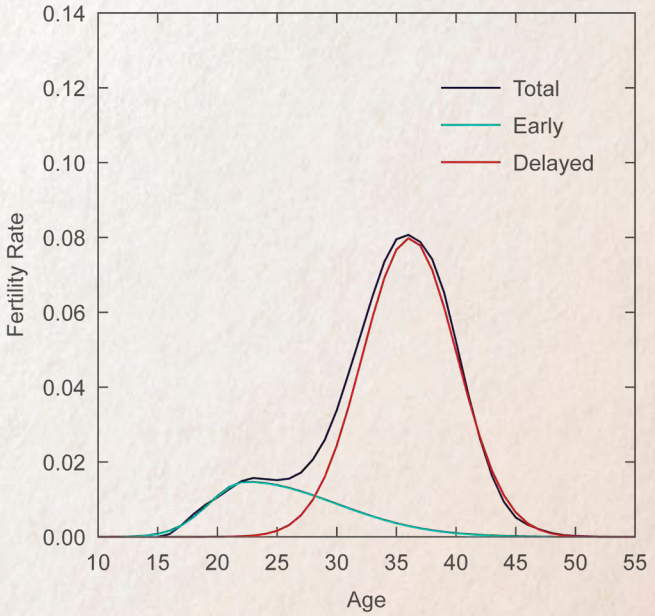
Chandola et al, 1999

Overseas-born

All females



Brazilian-born



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Summary

- Migration: Movers and Stayers
- Mortality: Compression and Delay
- Fertility: Early and Delayed

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Musing No. 1: Output Vs Input

- *Output*: As a diagnostic of population 'splitting' these developments are suggestive but …
- *Input*: Population projections are (currently) not particularly sensitive
- Need estimation and projection methods for difficult to observe sub-populations

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Musing No. 2: Recruitment of Movers

- The general population follows the out-migration curve
- An interstate migrant follows the return migration curve
- Is interstate recruitment efficient as a growth strategy?

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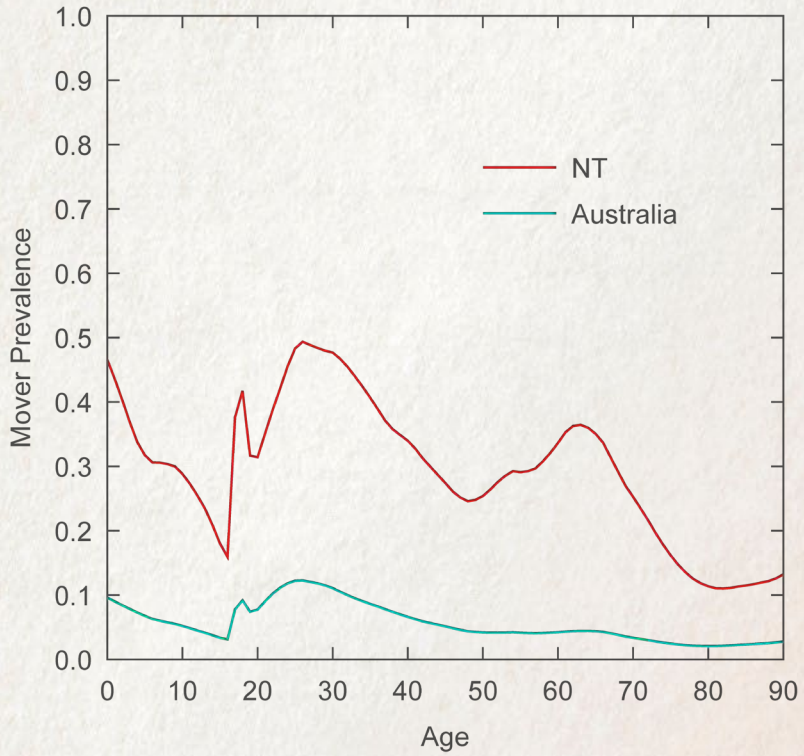
Musing No. 3: Prevalence of Movers



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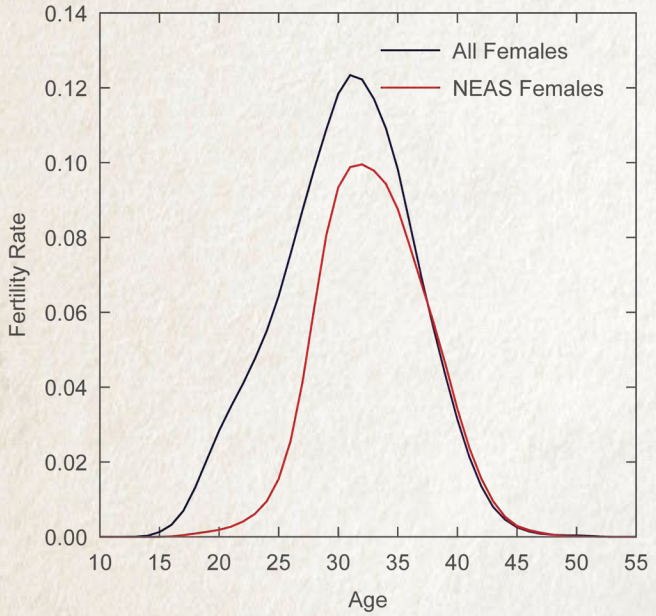
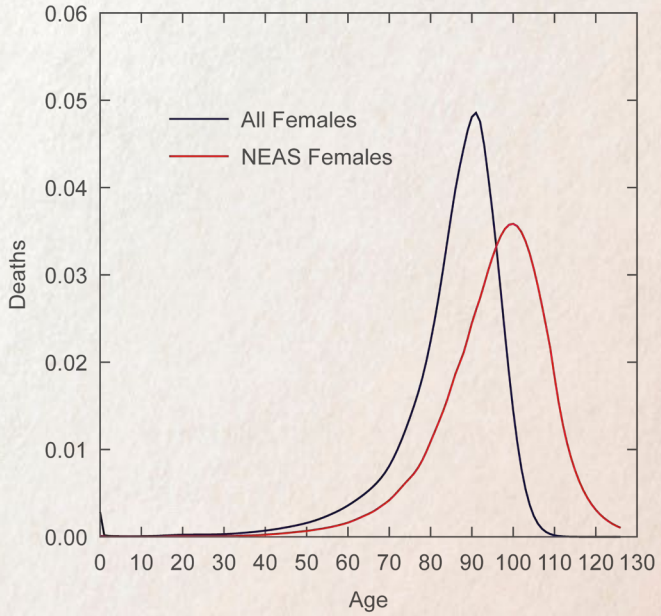
Musing No. 4: The migrant future?

Fertility



Mortality



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Musing No. 5: Family vs Career?

- Education:Work+Family:Leisure = 20:40:20
- Family formation competes with career
- Mix education, work, family and leisure across the ages?

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Conclusions

- Increased differences
- Sub-national populations
- Northern Institute/Northern Territory experience

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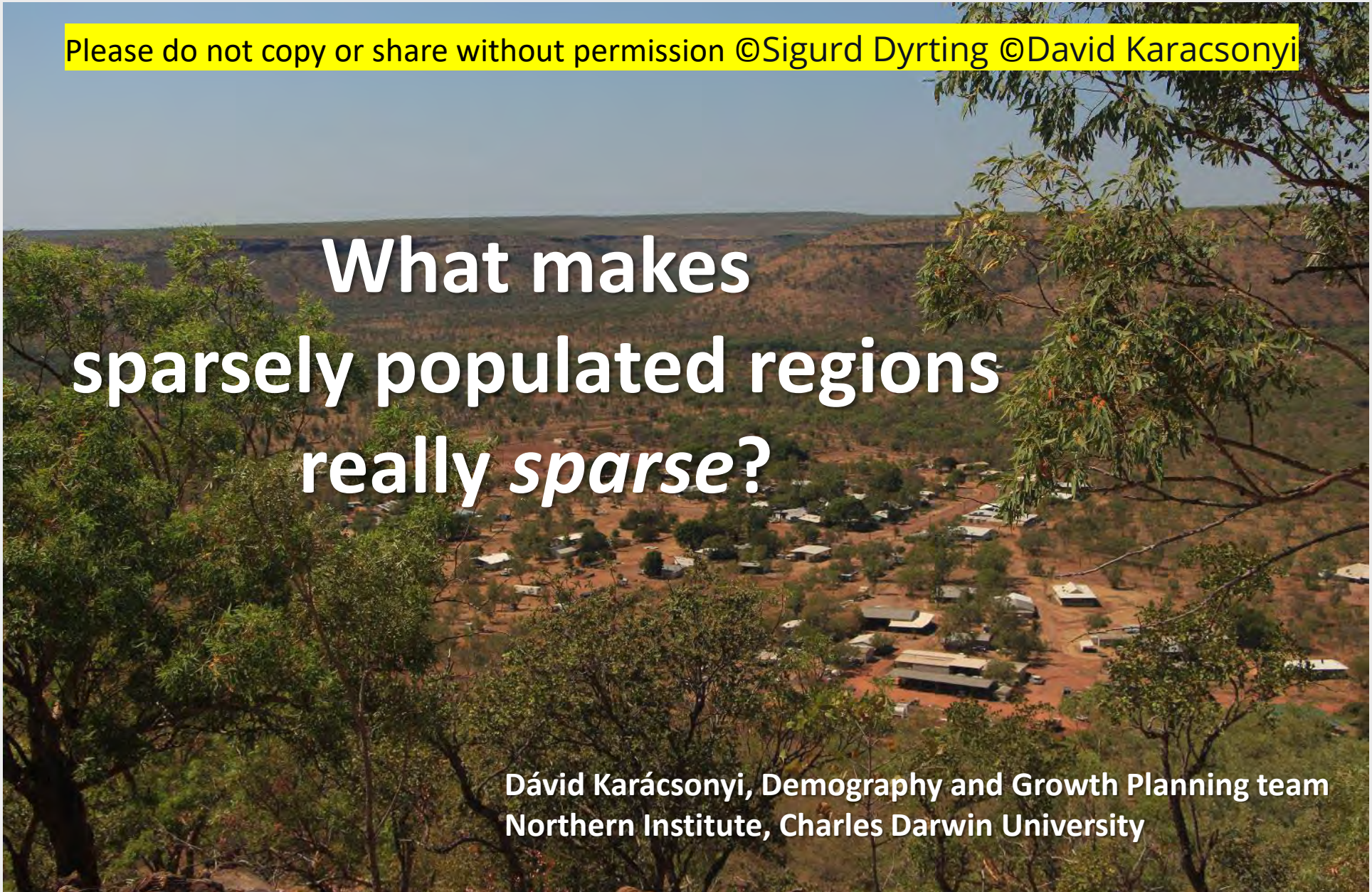
We'll return at 11am for the next research seminar with Dr Dávid Karásonyi.

What makes sparsely populated regions really *sparse*?



What makes sparsely populated regions really *sparse*?

Dávid Karácsonyi, Demography and Growth Planning team
Northern Institute, Charles Darwin University

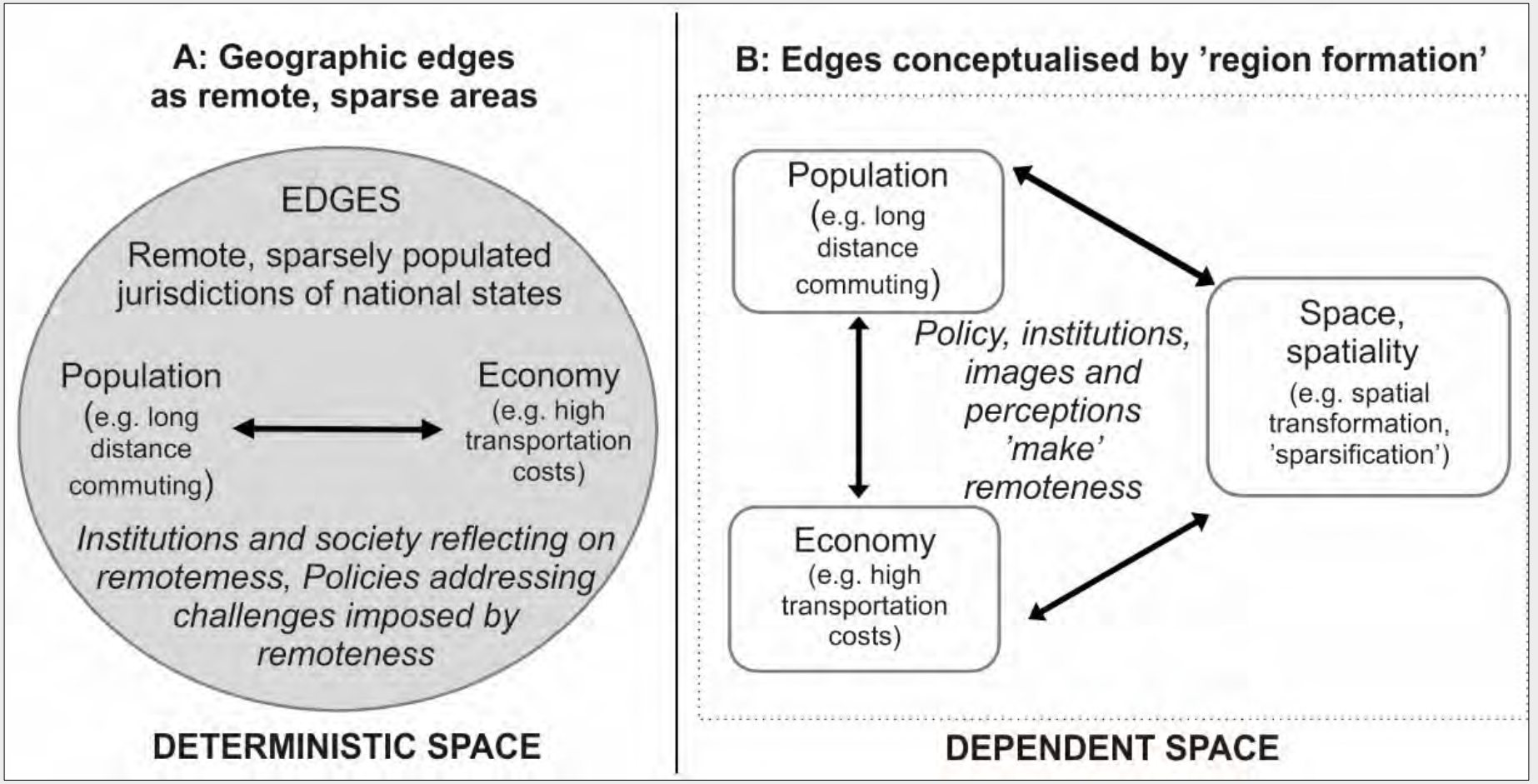
Today's talk

1. Understanding sparsely populated areas
2. Example 1: Remoteness of the NT
3. Example 2: Spatial distribution of Indigenous population
4. Example 3: Explaining remote unemployment
5. Conclusions

How do we understand sparsely populated regions?

Viewpoint	***Remote***	***Relative***
Spatiality	***(Externally) Given***	***Dynamic***
Definition	***Accessibility***	***Otherness***
Argument	***Consequence***	***Construct***
Language	***Positivist***	***Poststructuralist***

Understanding spatiality in the context of sparsely populated areas (geographic edges)



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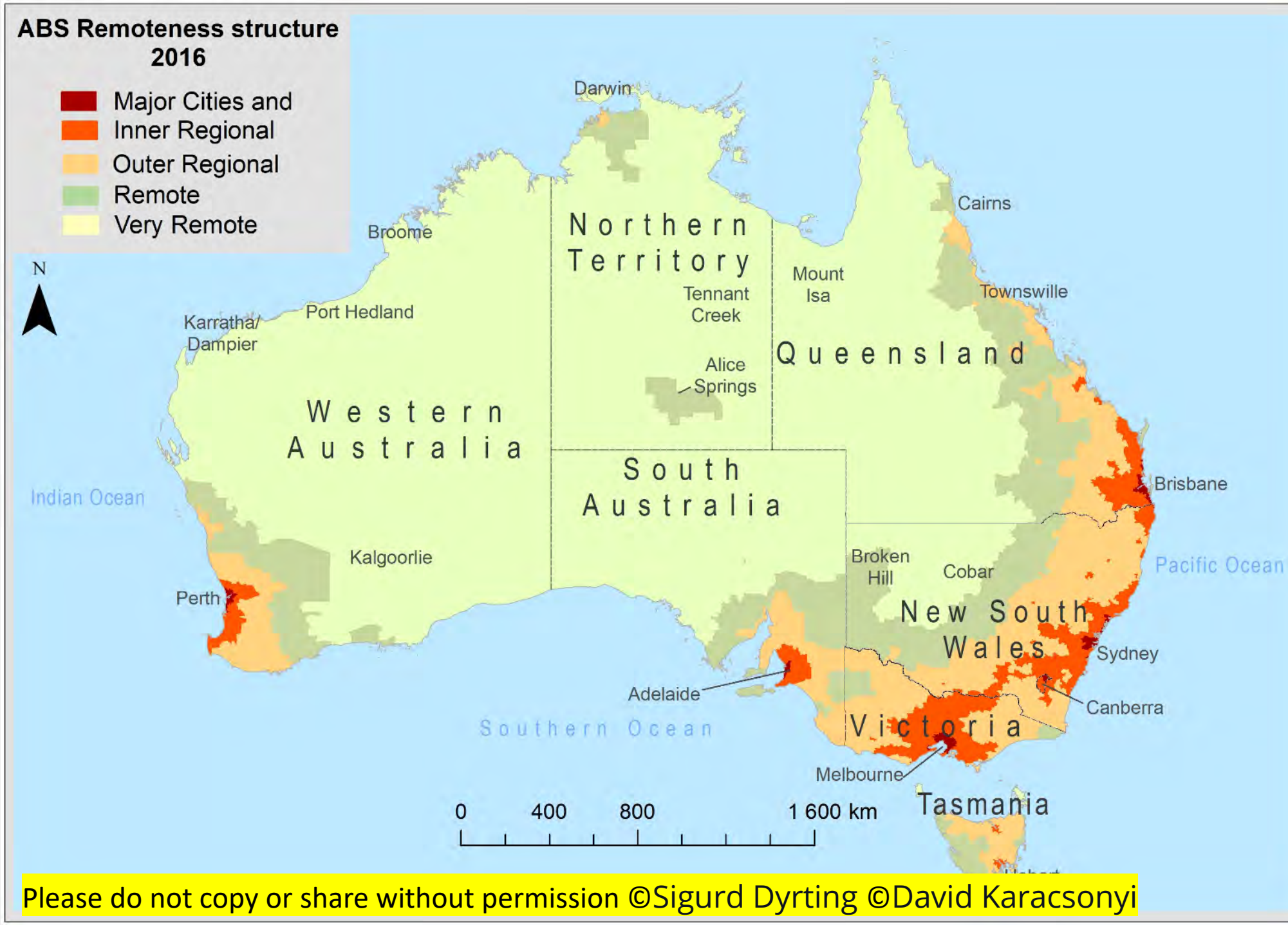
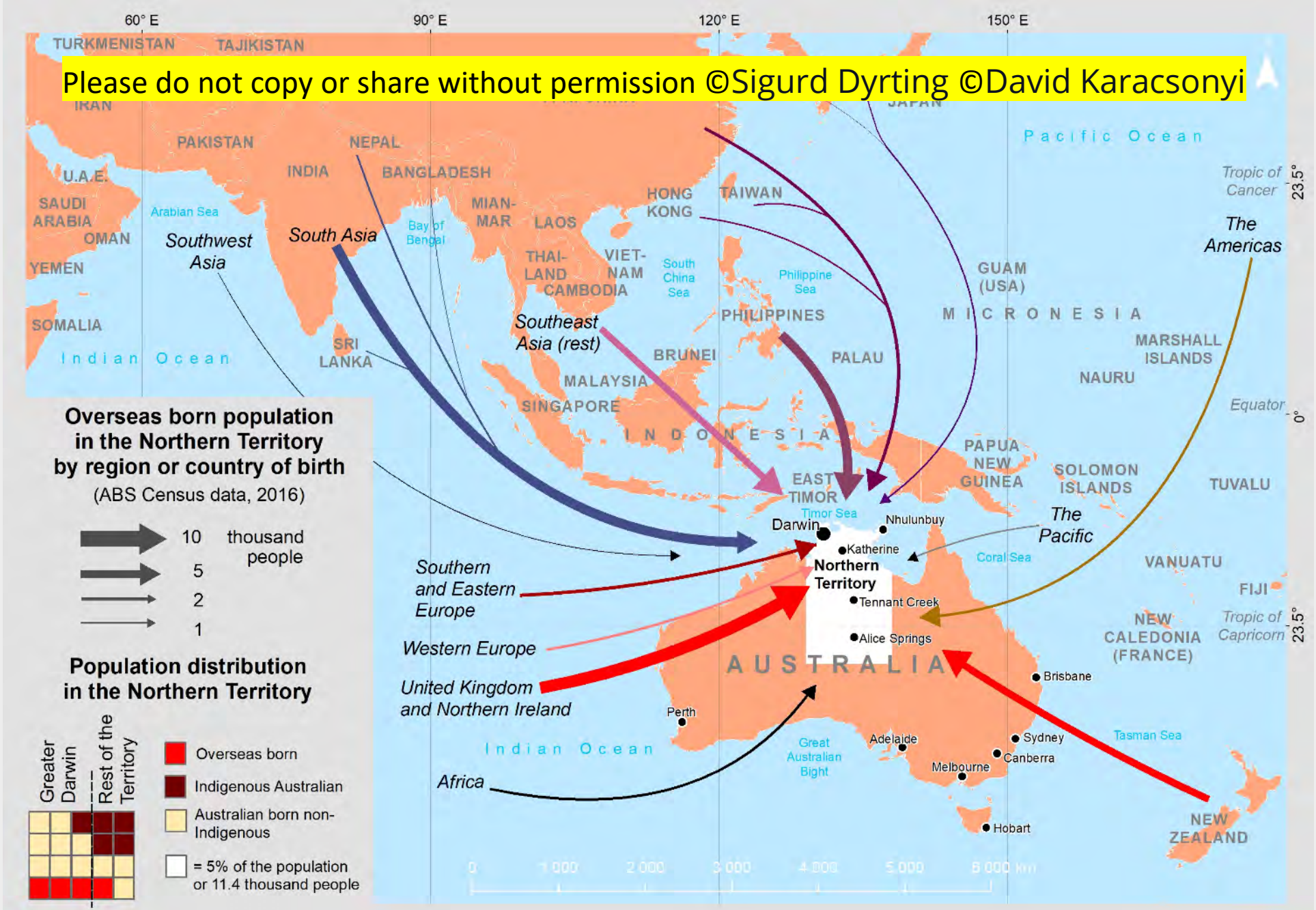
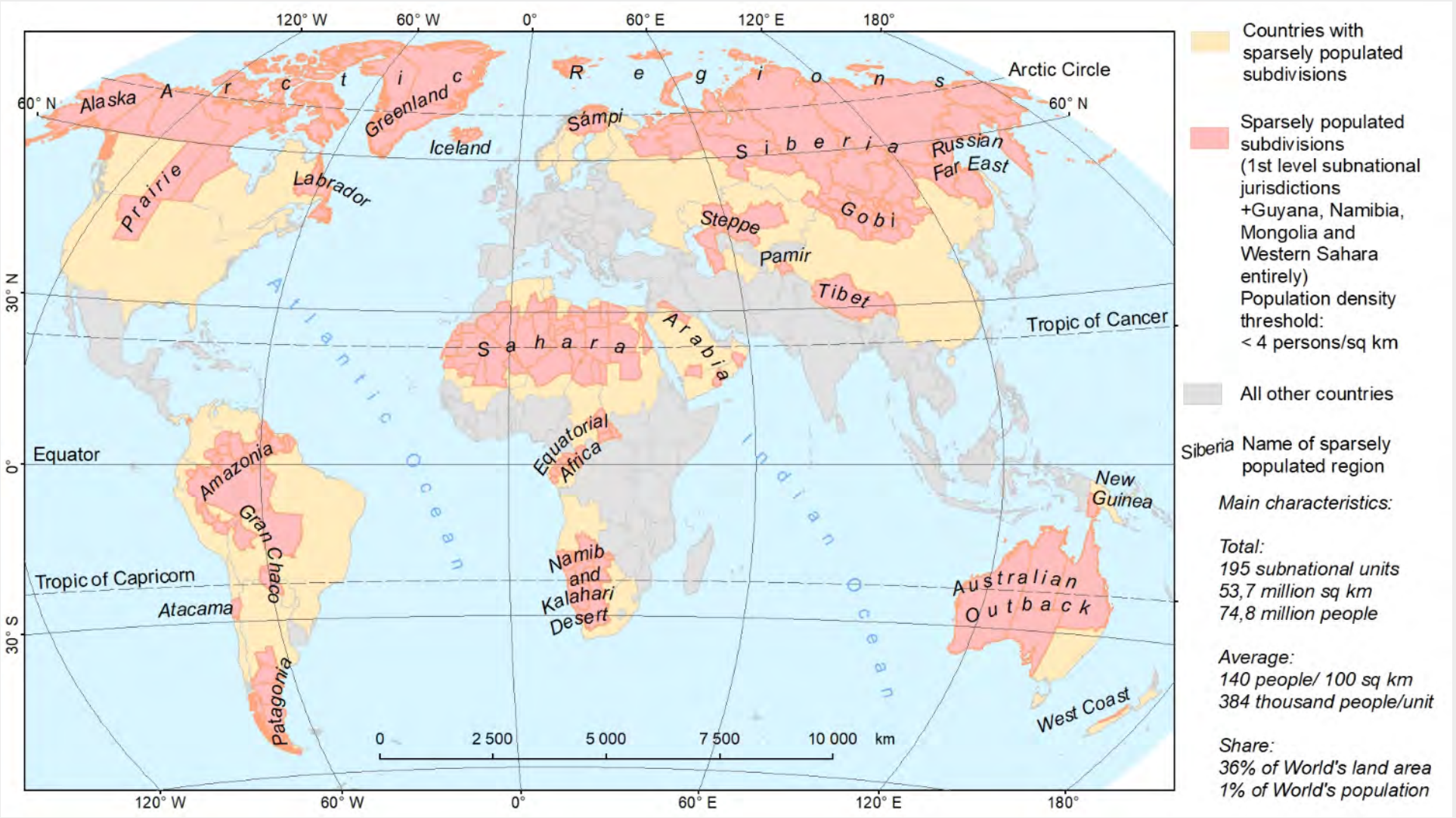


Overseas migration links of the Northern Territory

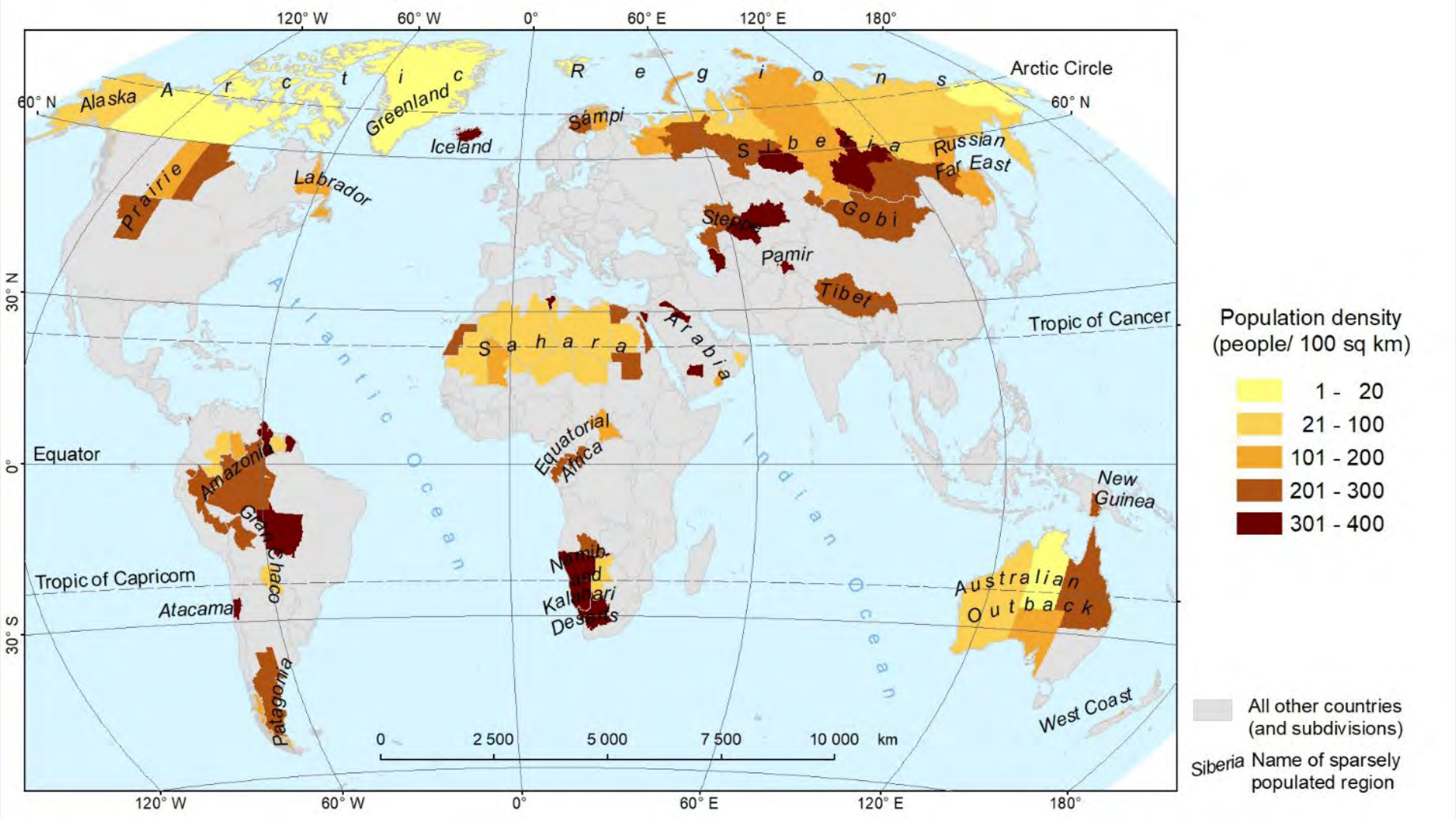


Sparsely populated 1st tier subnational administrative divisions of the world



36% of total land area, 1% of global population

Population density in the sparsest jurisdictions



Most sparse regions by population density

Rank	Name of the jurisdiction	Sovereign country	Area (thousand sq km)	Population (thousand people)	Population density (persons / sq km)
1	Nunavut	Canada	2038.7	38.9	0.02
2	Greenland	Denmark	2166.1	56.0	0.03
3	Northwest Territories	Canada	1346.1	41.8	0.03
4	Svalbard	Norway	61.0	2.7	0.04
5	Chukotka	Russia	737.7	49.3	0.07
6	Yukon Territory	Canada	482.4	35.9	0.07
7	**Northern Territory**	**Australia**	**1421.0**	**245.9**	**0.17**
8	Falkland Islands	United Kingdom	12.2	3.4	0.28
9	Sipaliwini	Suriname	130.6	37.7	0.29
10	Yakutia (Republic of Sakha)	Russia	3083.5	958.5	0.31
11	Magadan oblast	Russia	461.4	157.0	0.34

Arctic, subarctic, cold oceanic	Savanna, desert	Tropical

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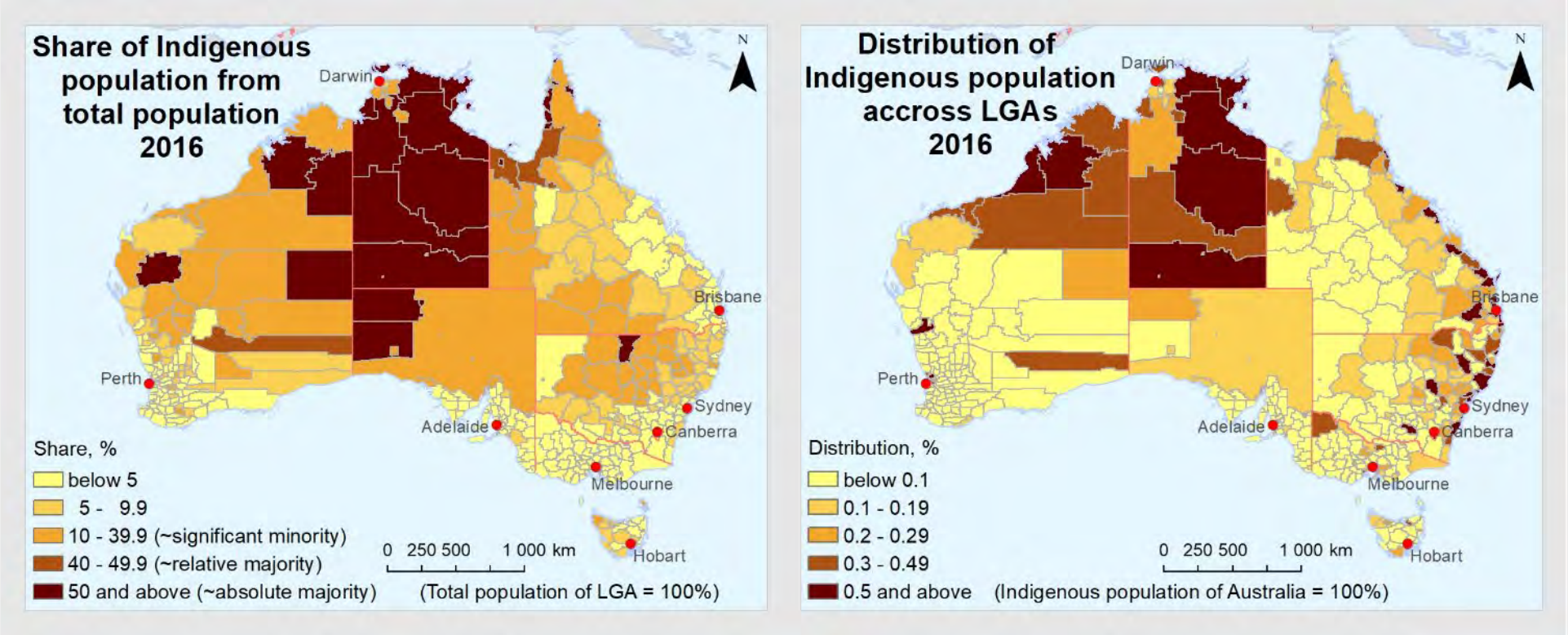
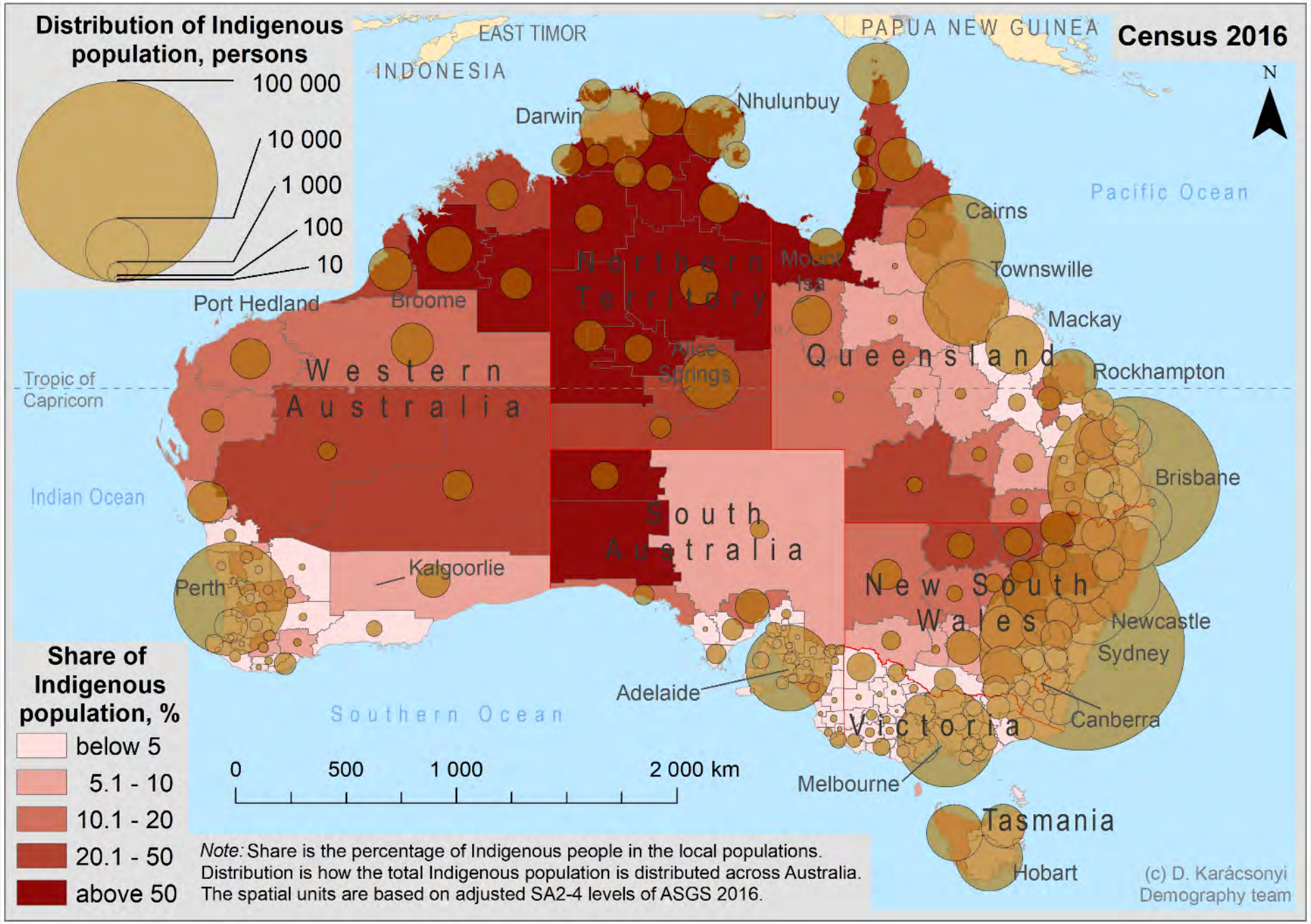
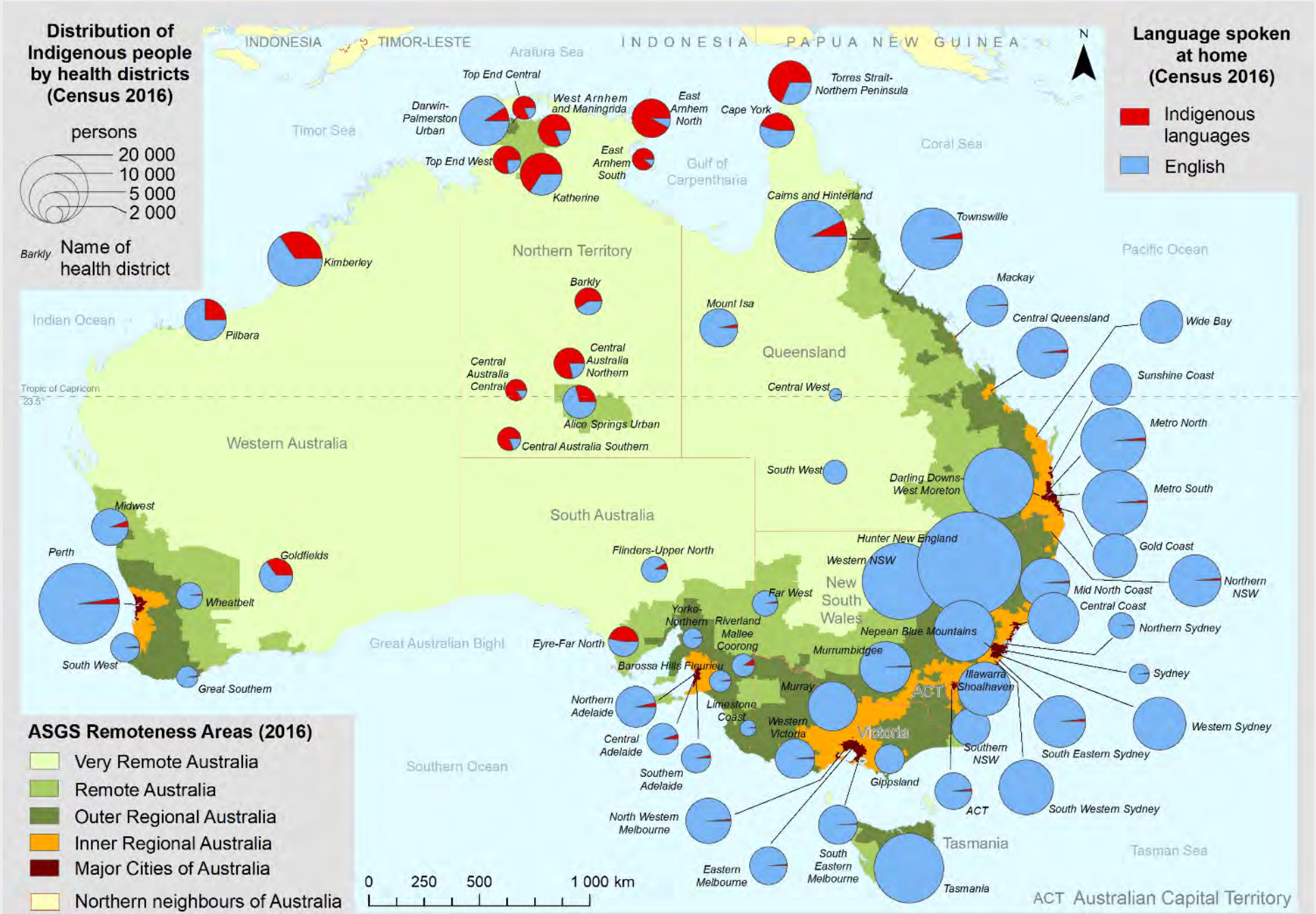
Spatial distribution of Indigenous Australian population



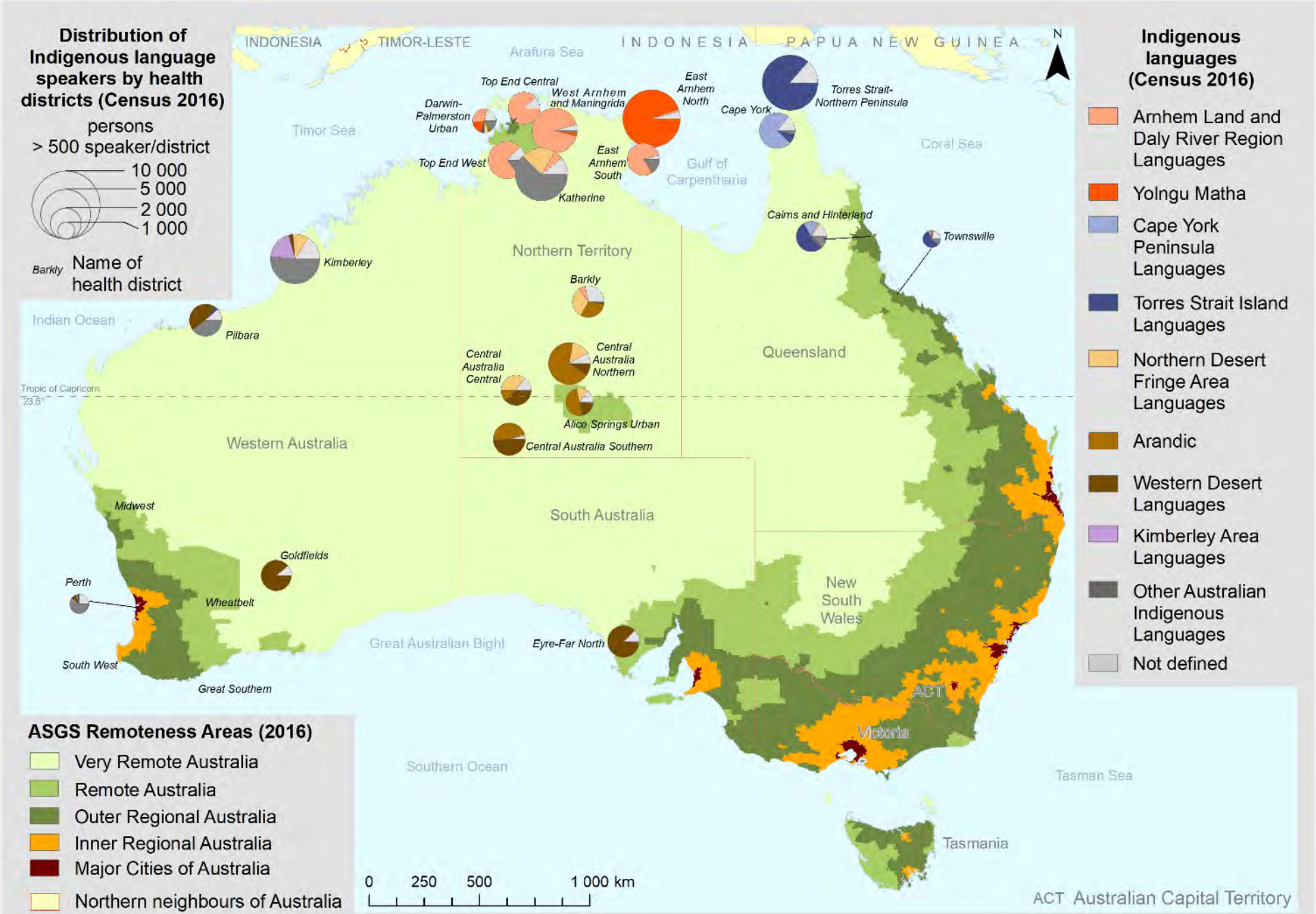
Spatial distribution of Indigenous Australian population



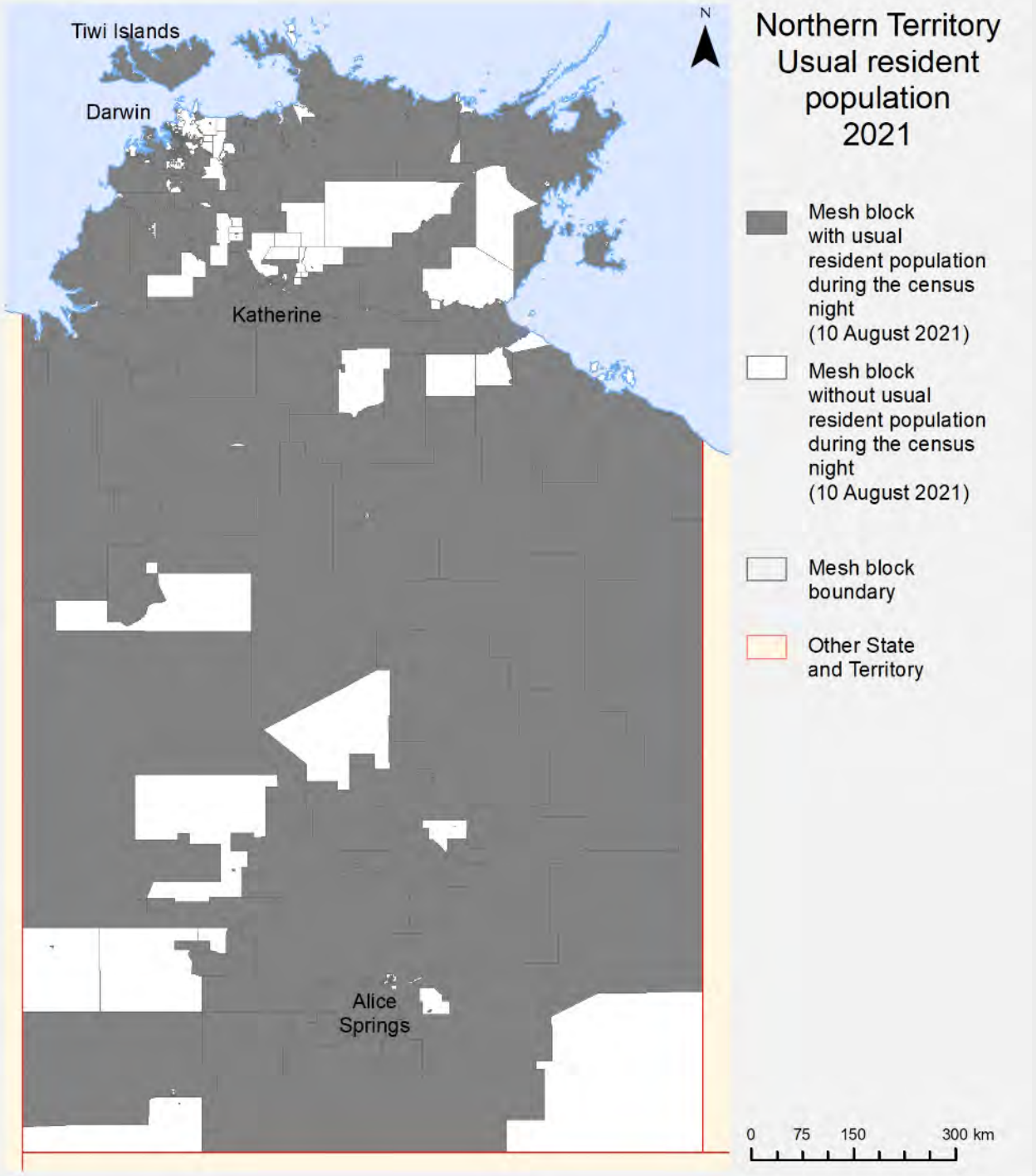
Spatial distribution of and language spoken by Indigenous Australian population



Spatial distribution of Indigenous language speaker population



Spatial distribution of population in the Northern Territory



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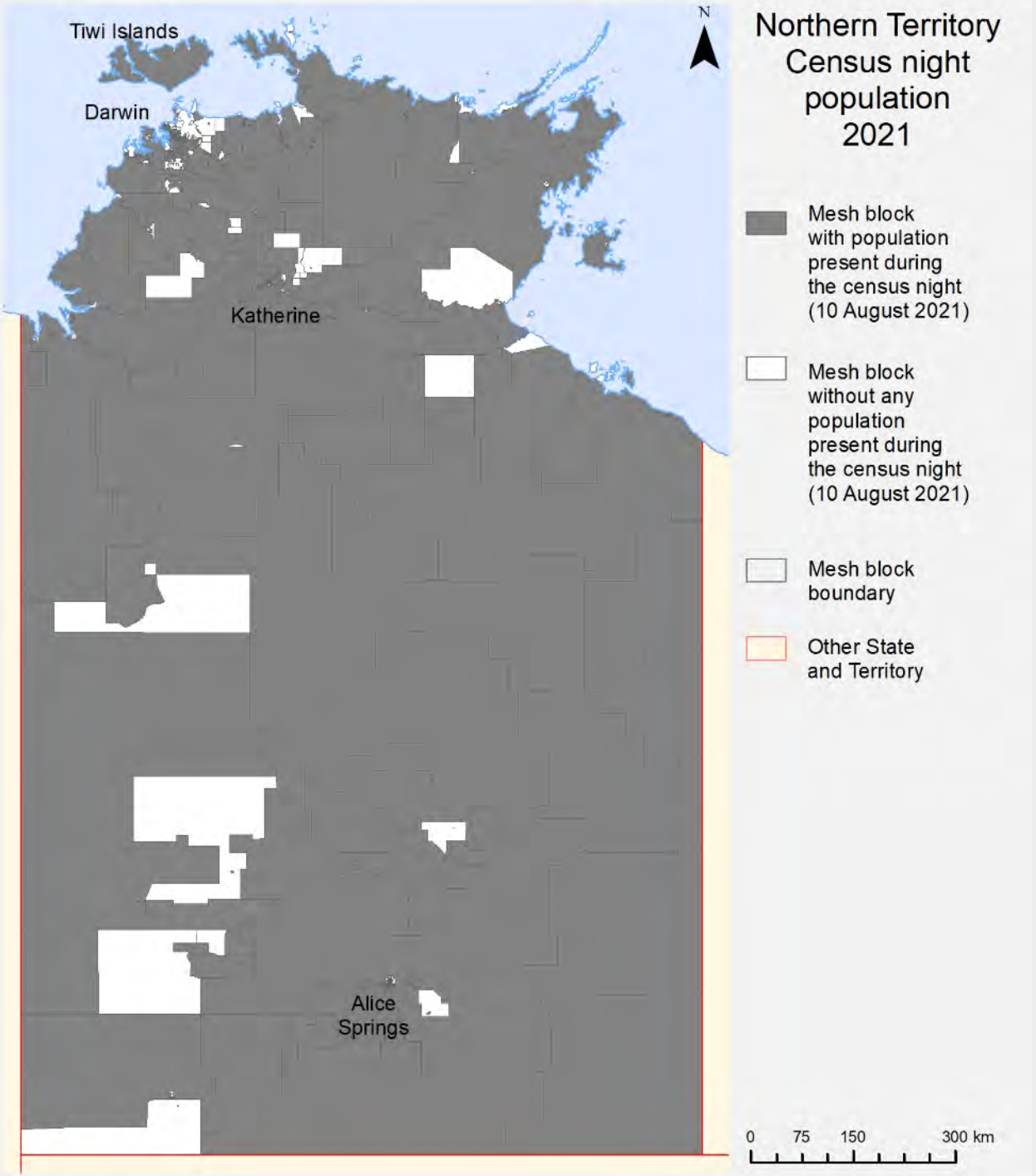

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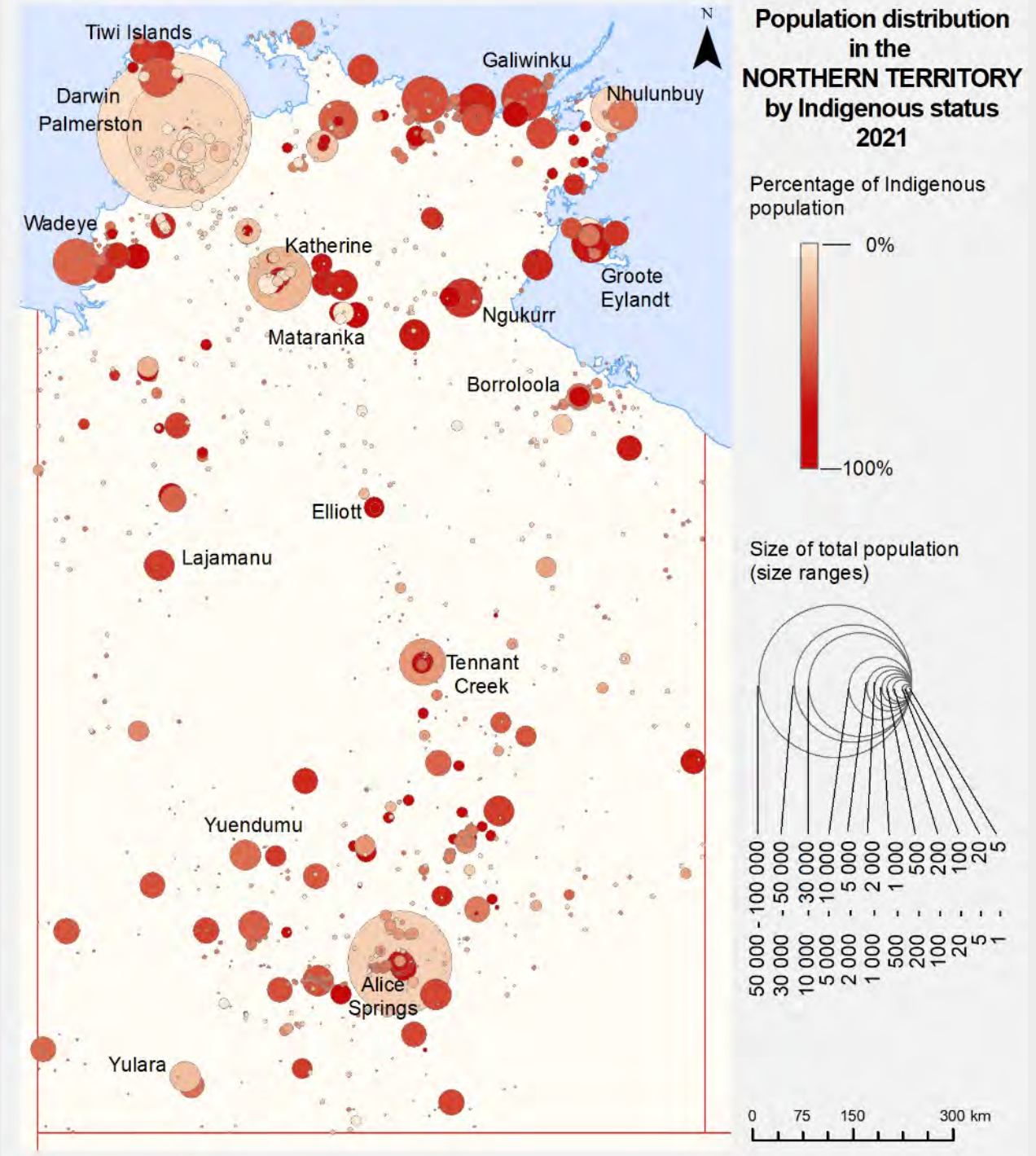

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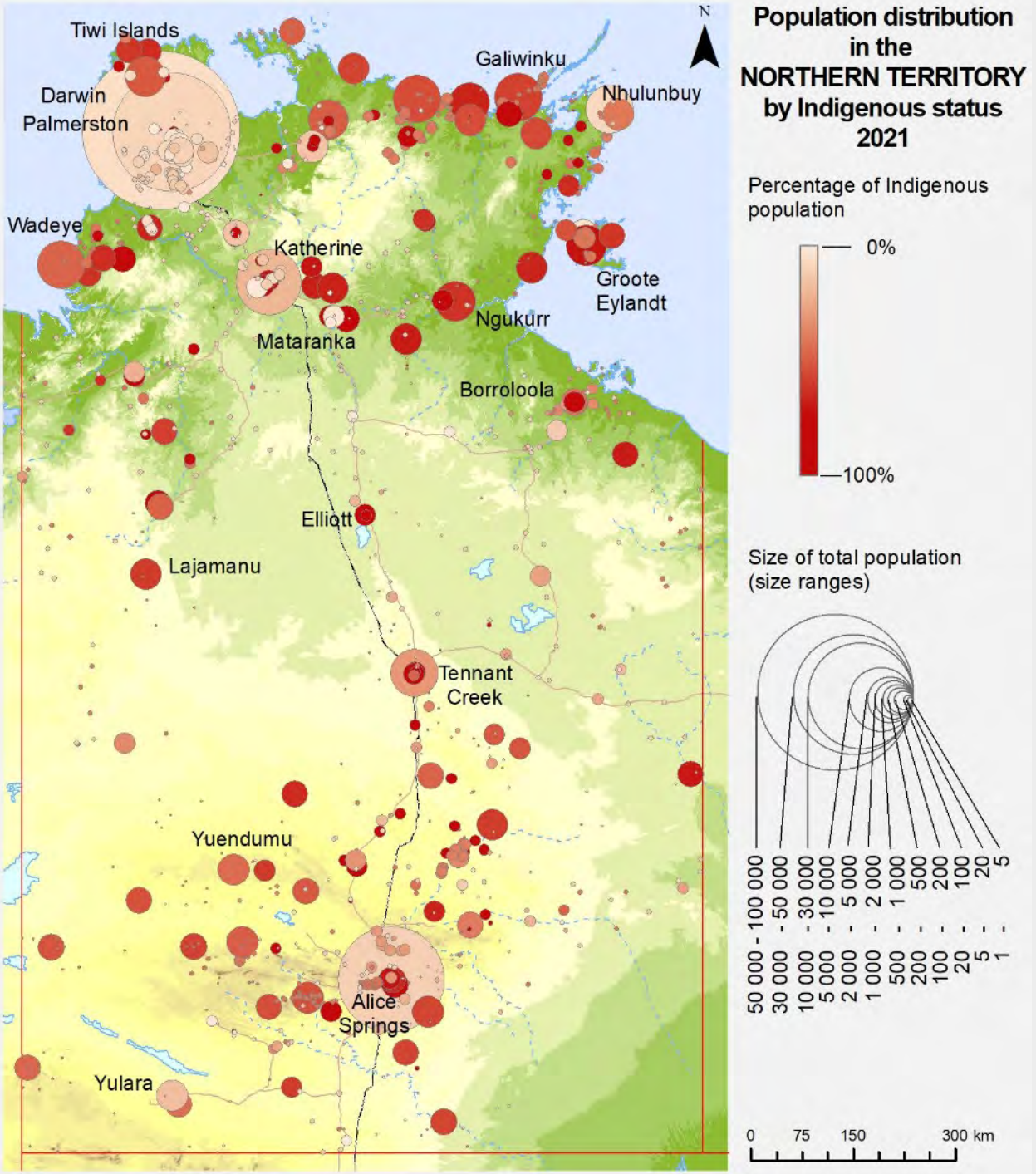

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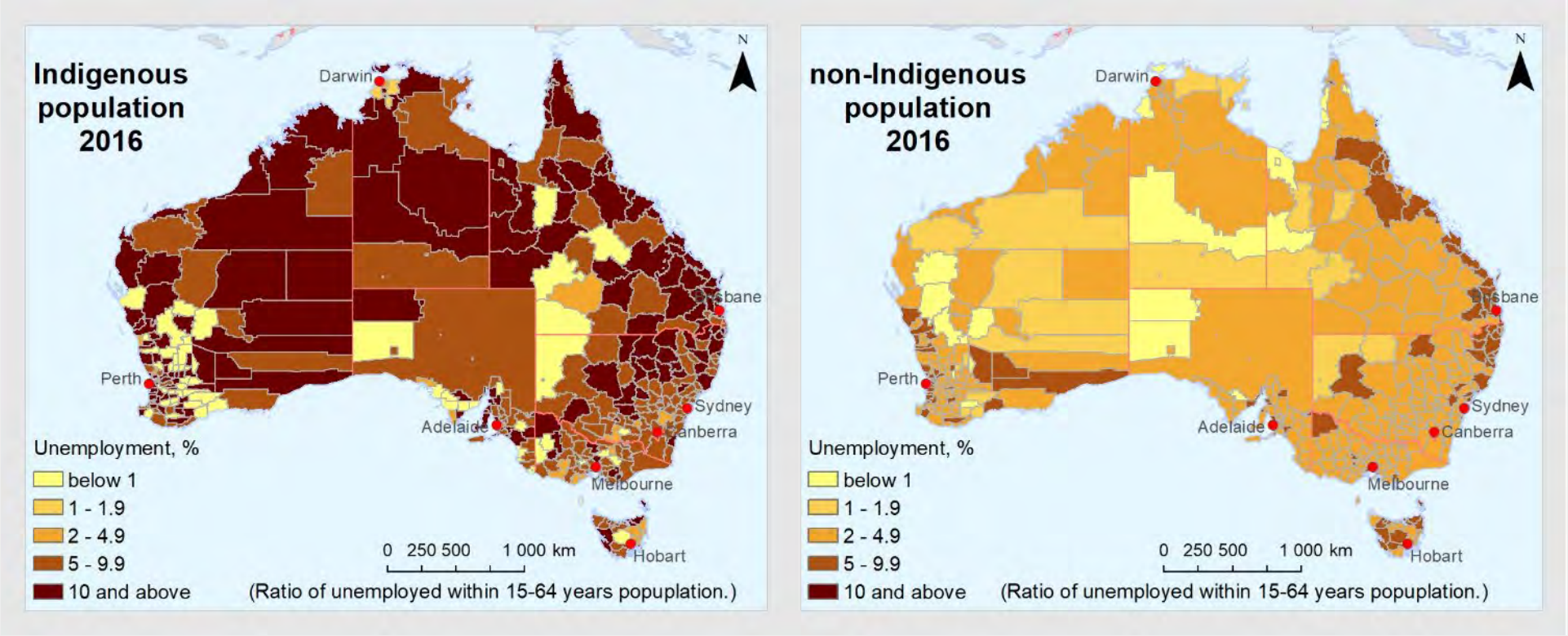
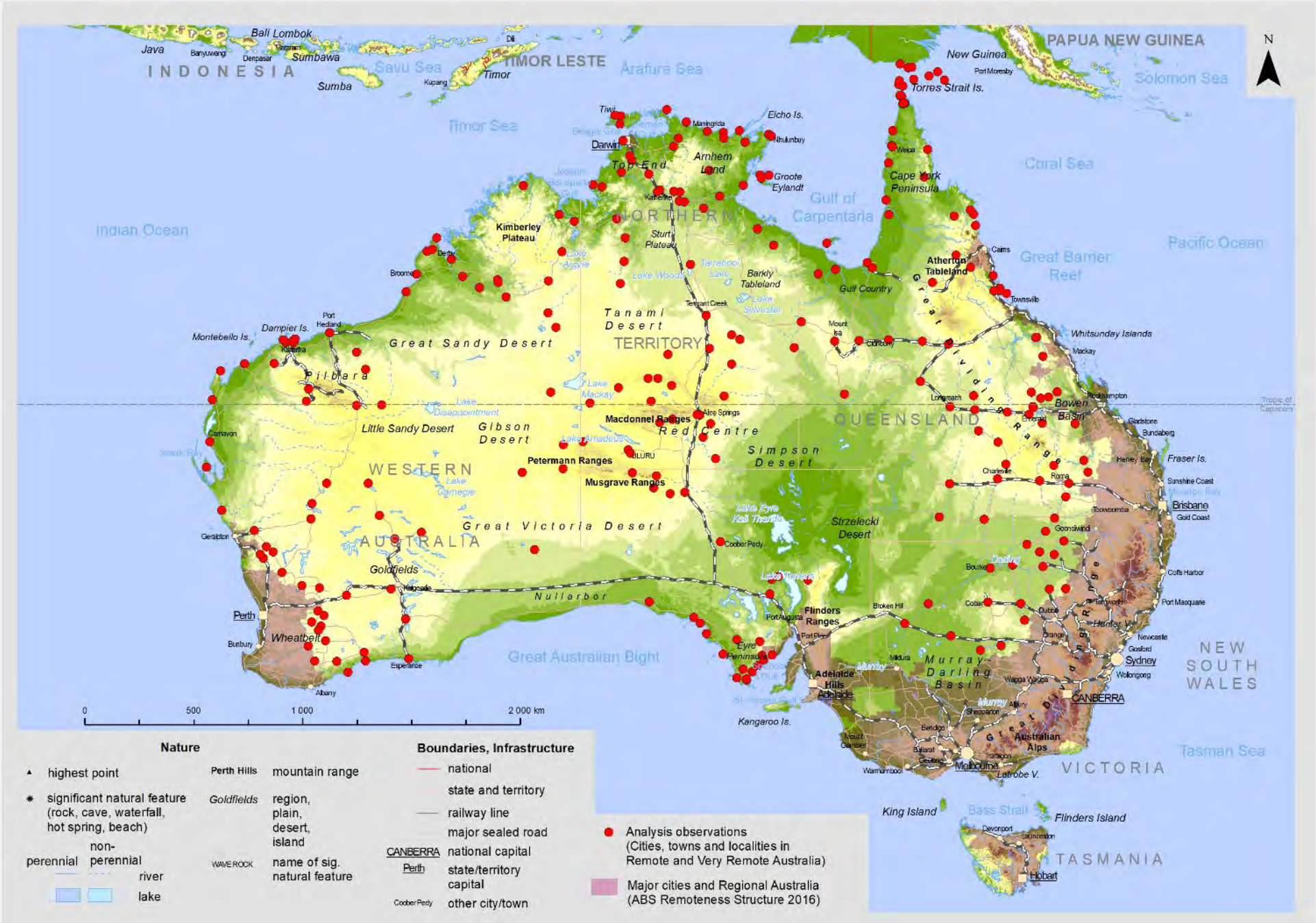
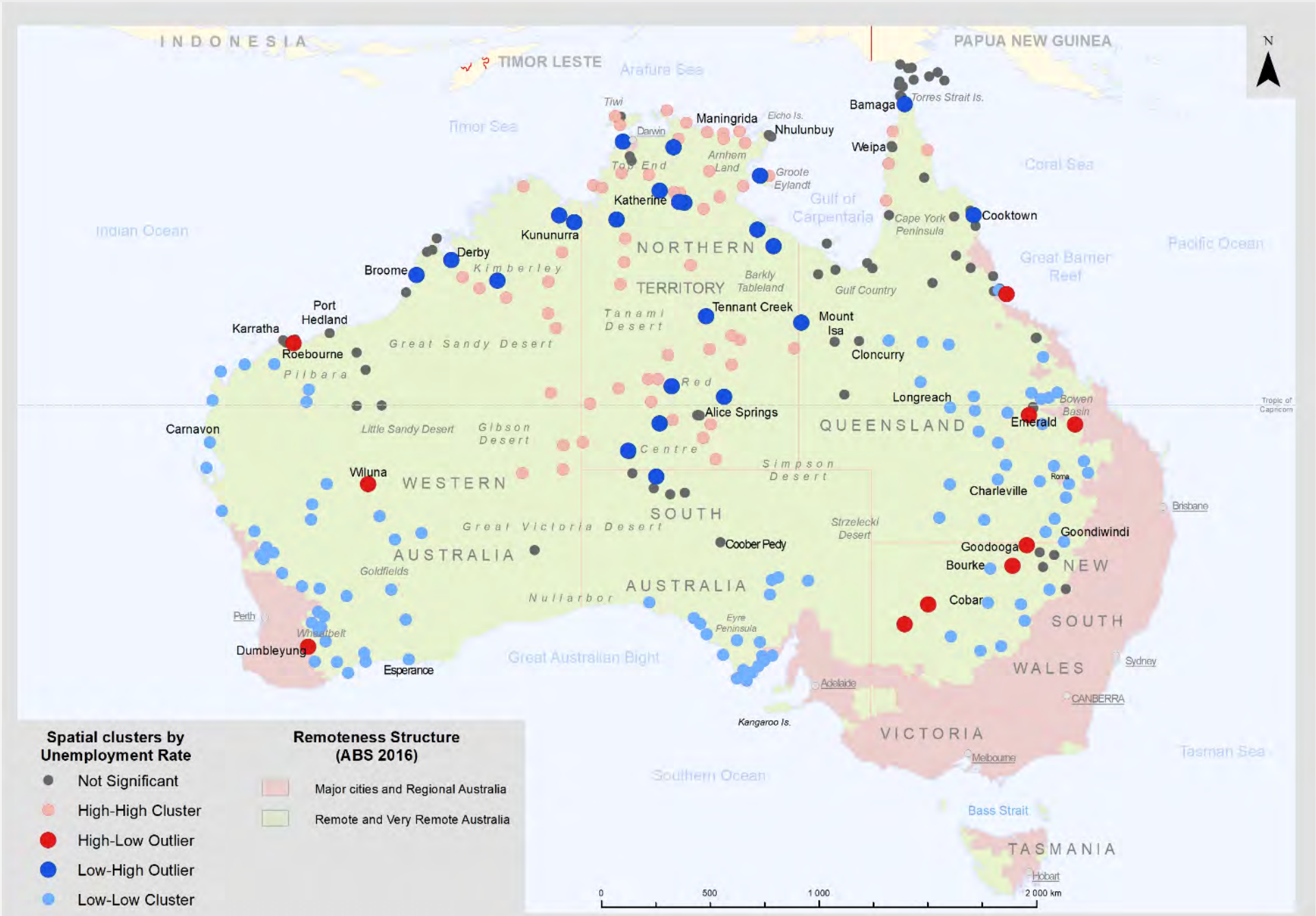
Unemployment rate and Indigenous Australian population



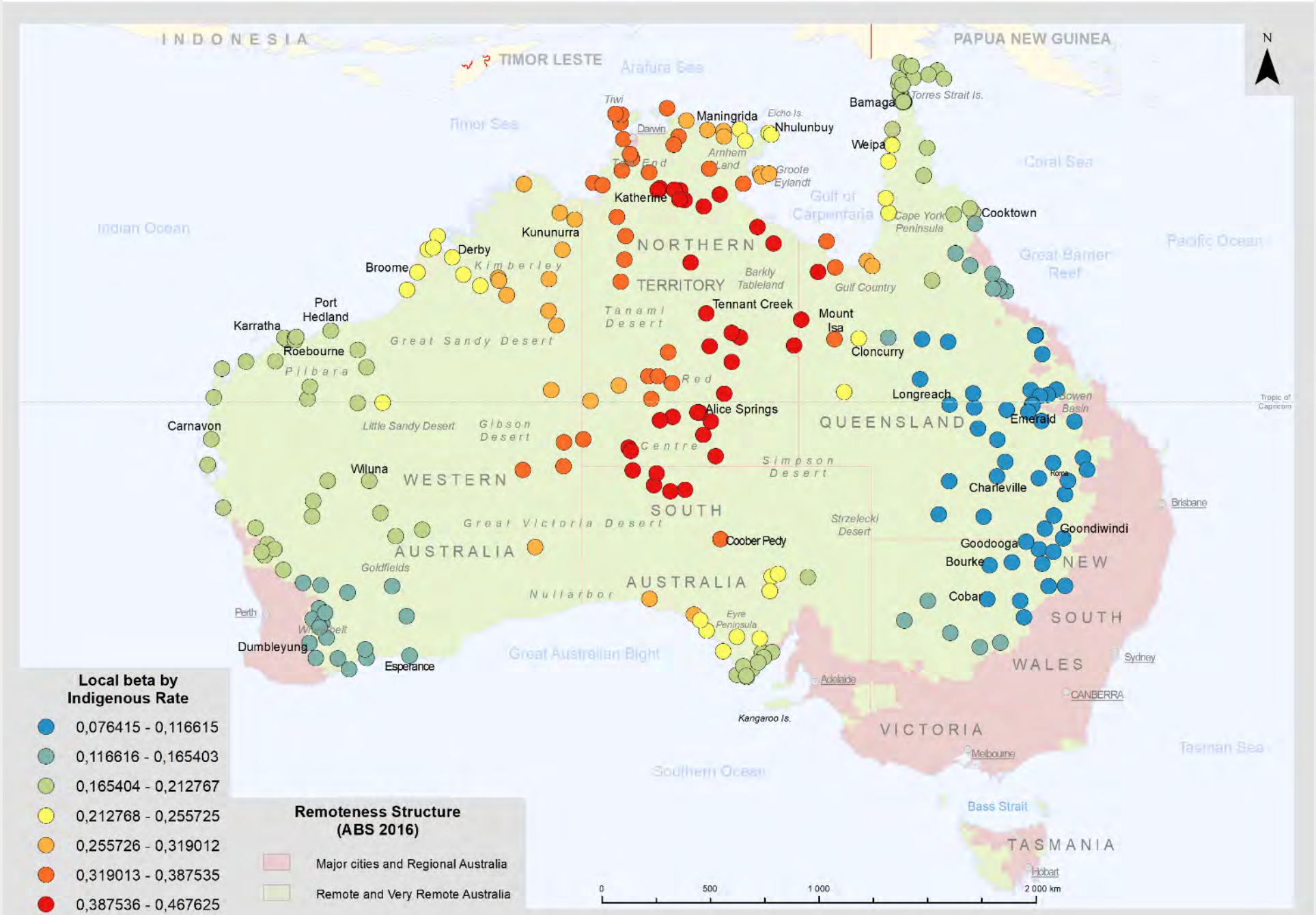
Remote and very remote towns in Australia



Spatial diversity in unemployment rate

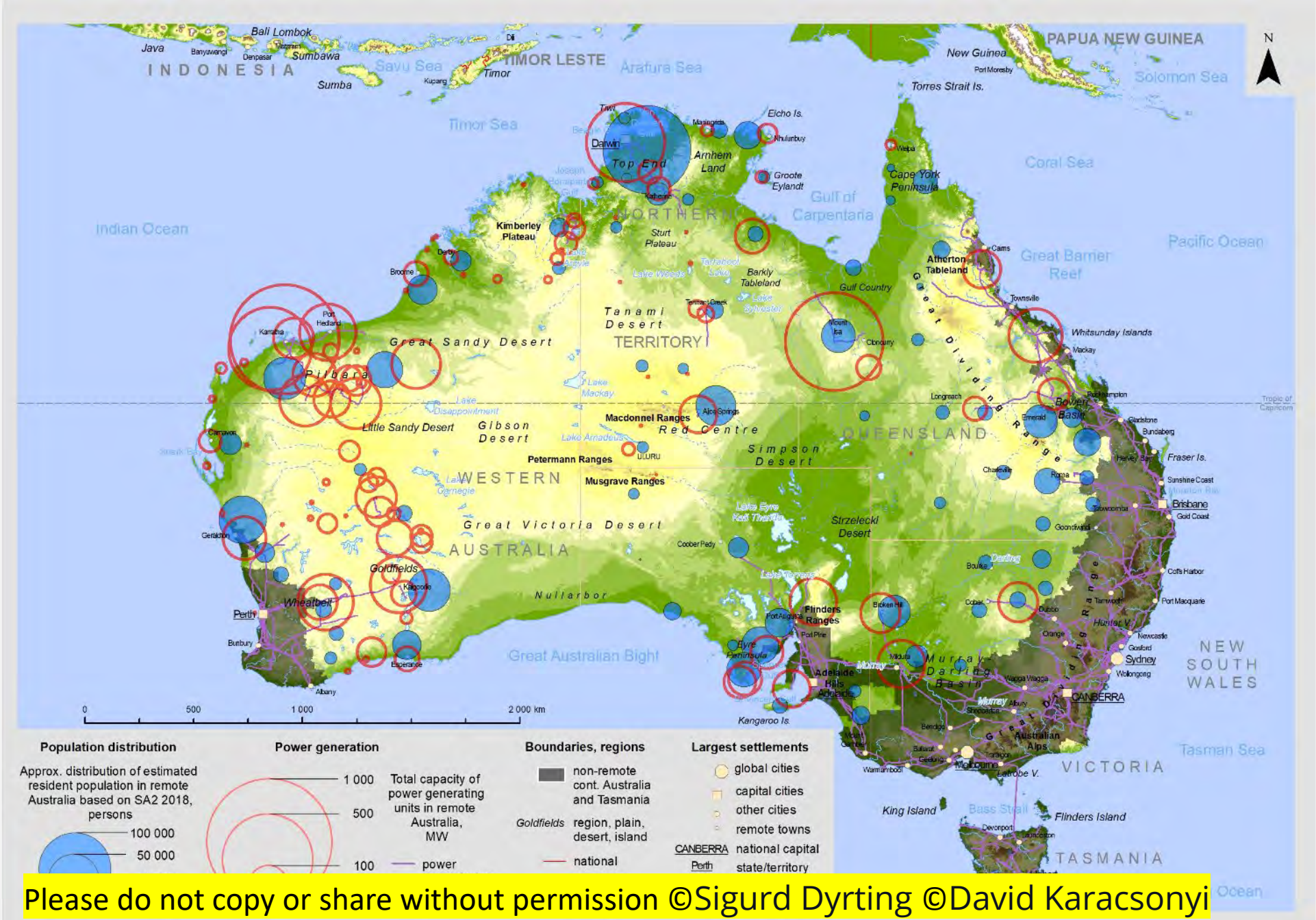


Explaining unemployment rate (?)



Spatial distribution of resource extraction

Spatial distribution of population and resource extraction



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What makes sparsely populated regions really *sparse*?

Conclusions

- Significance of conceptual **implications for spatiality** (dependent space)
- Methodological **limitations from uneven population distributions** (choice of spatial configurations, scales and weighting)
- Careful **choice of spatial analysis and visualisation method**
- Awareness of **human–geography–spatiality nexus behind the existence of edges** – not to confound systematic relationships
- Policy **focus on localised strengths, opportunities and institutional frameworks** in situ rather than on spatial disadvantage (as externally given)
- **Re-orientation policy making** from addressing consequences from sparsity 'ex post' to the role of institutions in reinforcing and reproducing remoteness by asymmetric power hierarchies



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Demography and Growth Planning