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Demographic megatrends and global population growth

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Expert Group Meeting on Population, Food Security, Nutrition and Sustainable Development

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Four demographic mega-trends

- Population growth
- Population ageing
- International migration
- Urbanization
- Methods of UN World Population Prospects

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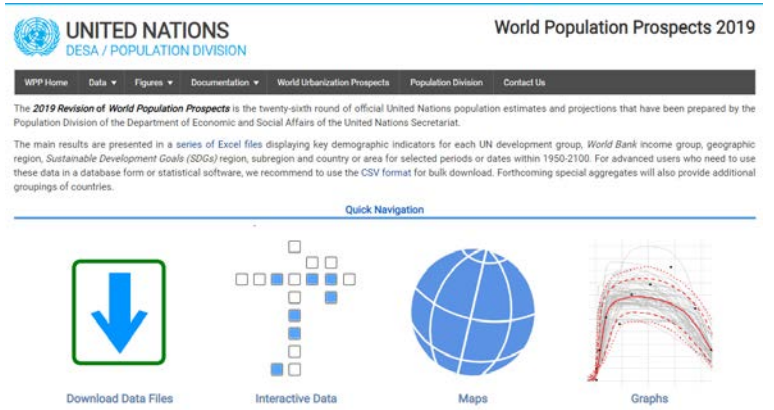
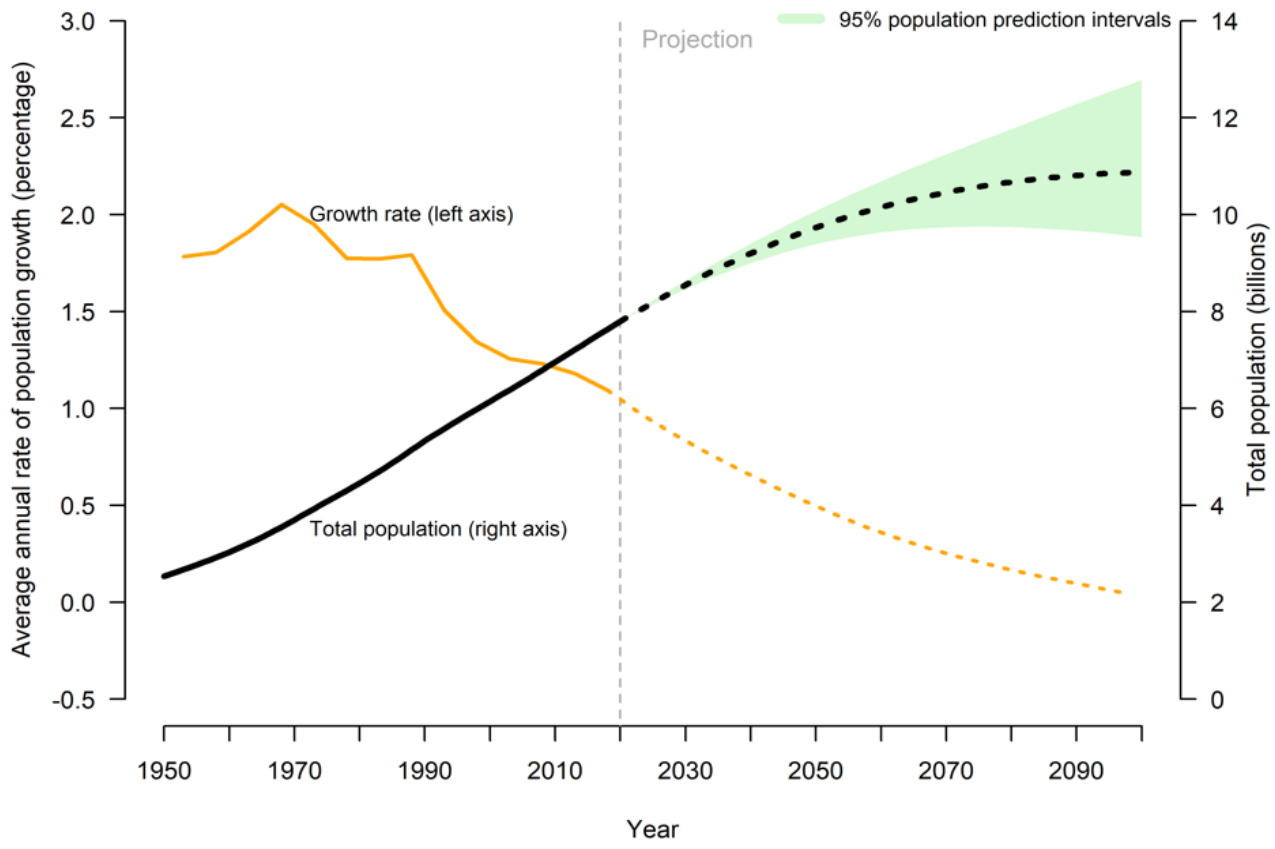


World Population Prospects 2019
What's new?

- Updated Estimates since WPP 2017 – 1700 census, 2700 surveys plus register data for 235 countries and areas since 1950
- Lower baseline for 2019 population and slower increase of life expectancy predicted for about 20 countries
- Lower TFR predicted for some large countries, e.g. Bangladesh, DRC, India, Iraq, Kenya, Niger, Nigeria, Philippines, Tanzania, Uganda, USA and Zambia
- Population projection for 2100 down by 309 million from 11.2 to 10.9 bn,
- Median variant with prediction intervals is new standard variant
- Additional indicators with prediction intervals will become available

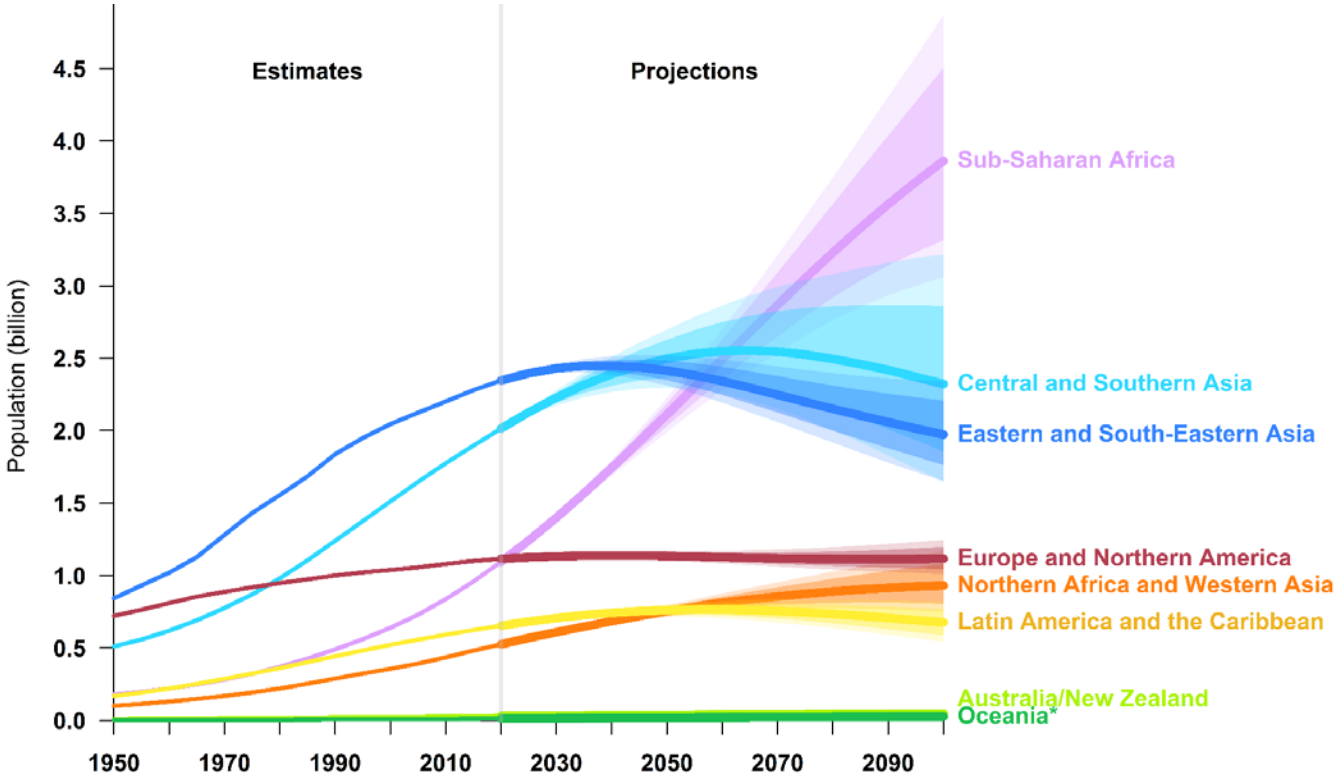
Global projections

- Population growth continues globally, but the relative increase has been slowing since the 1960s.
- The world population could stop growing grow around 2100.



Regional projections

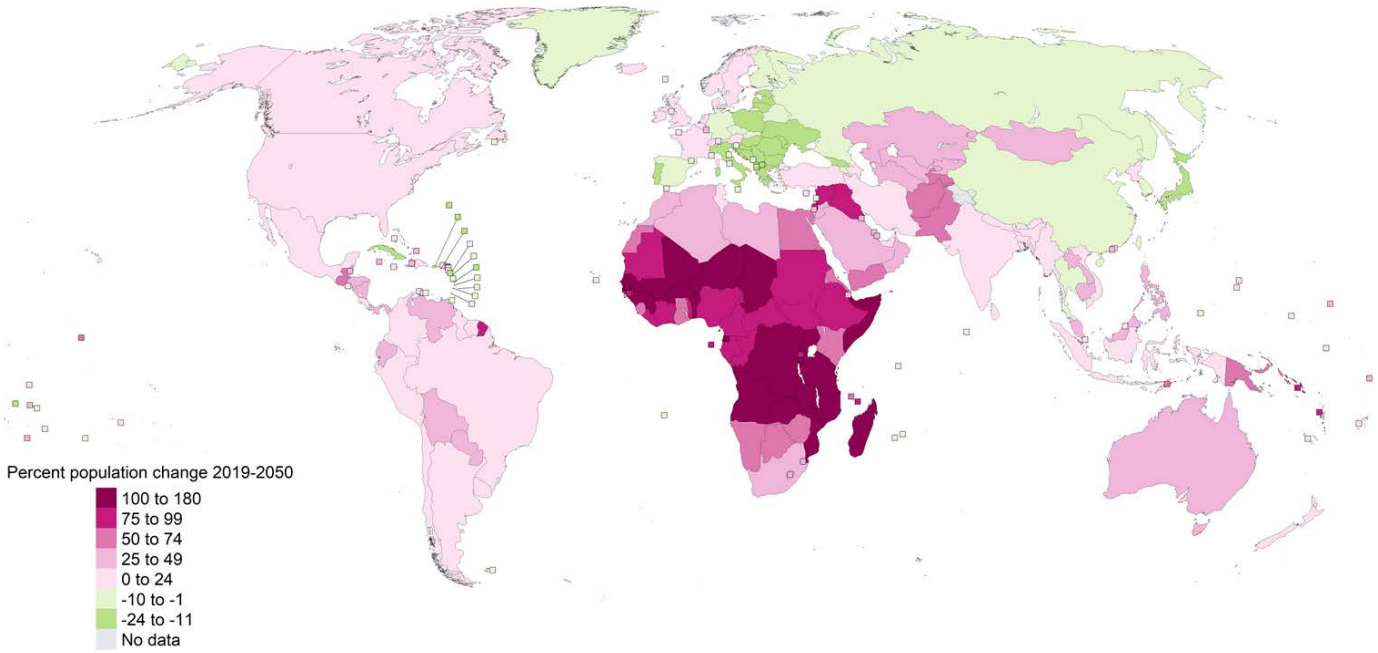
- Sub-Saharan Africa will account for most of the growth of the world's population over the coming decades
- Several other regions will experience a decrease in population size or remain almost stable



Population growth and the SDGs

- Population growth could challenge efforts to achieve the SDGs, especially in the LDCs

- Population growth between now and 2050 is expected to be highest in some countries and areas in Sub-Saharan Africa



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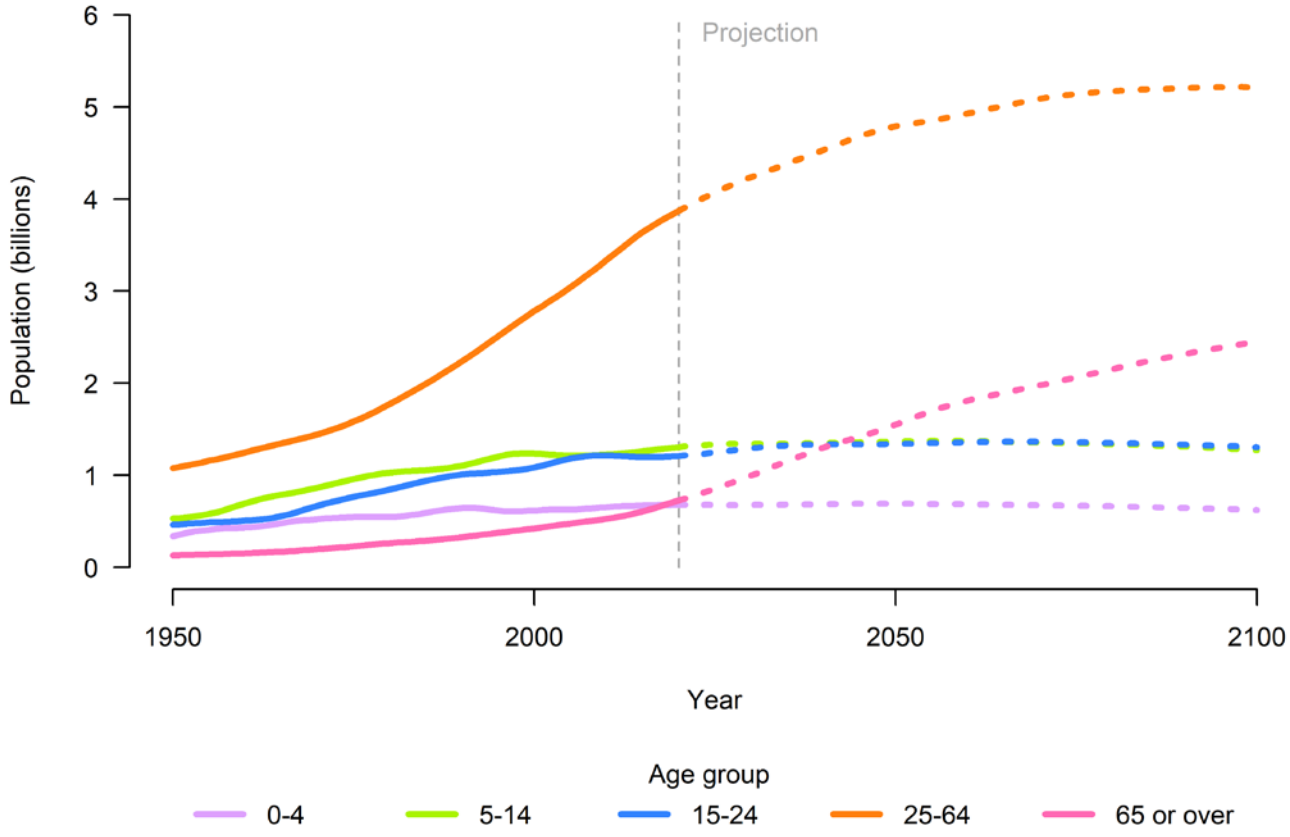
The global population is growing older

- Age group 65+ will see the largest increase till the end of the century
- Working-age population continues to increase, while child and youth population will remain almost stabile



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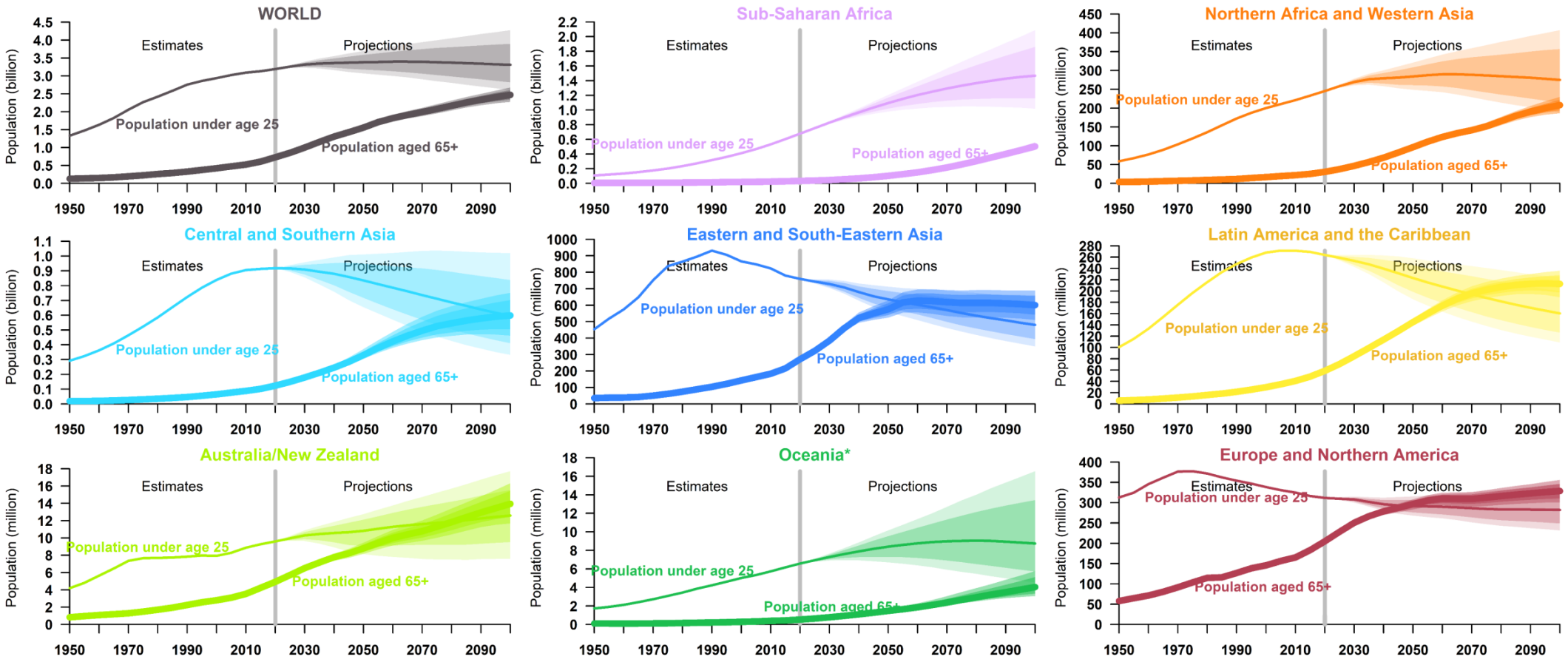
Relative shares of older and younger population vary by SDG region



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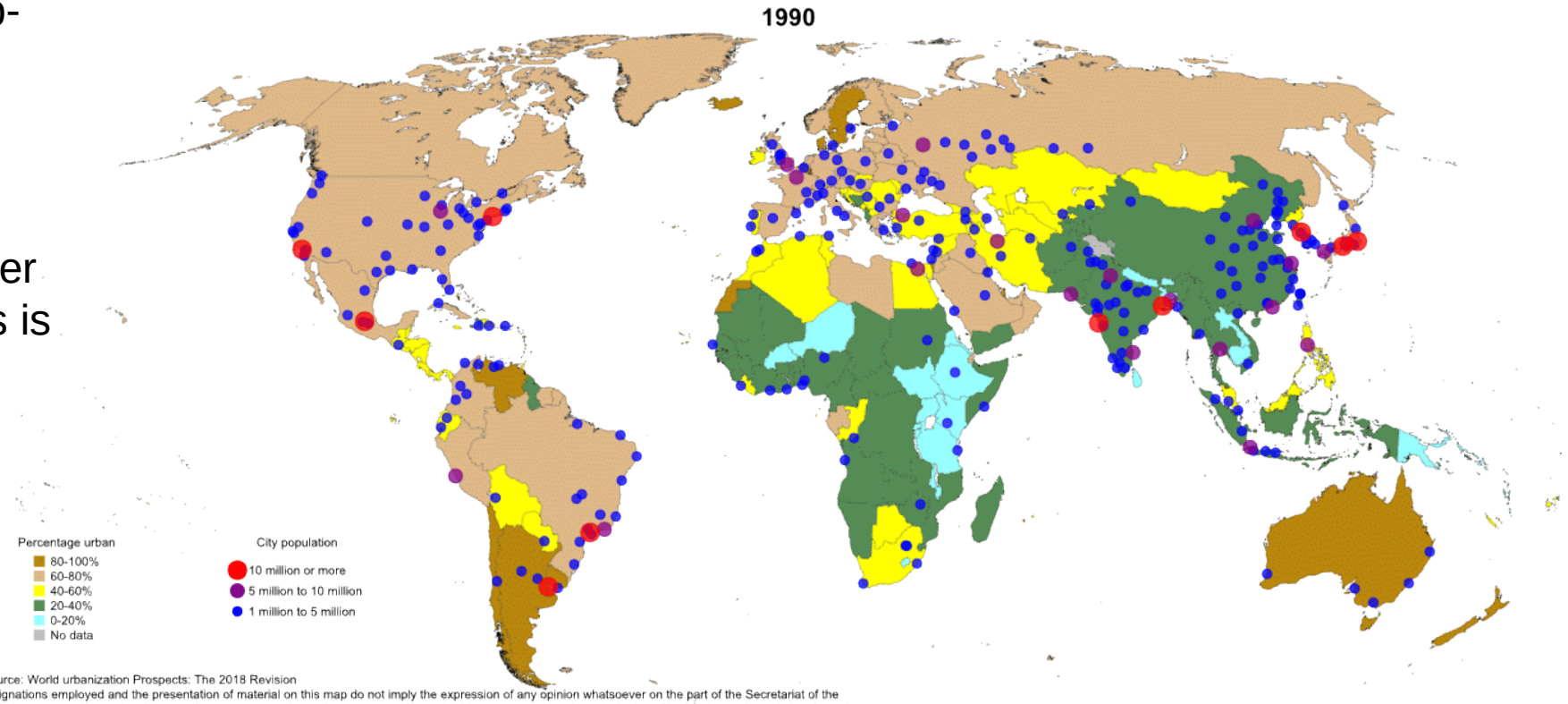
Urban percentage and cities > 1 million

- Urbanization in Sub-Saharan Africa and Asia is projected to continue
- Number of cities over 1 million inhabitants is growing most in less developed regions



Data source: World urbanization Prospects: The 2018 Revision

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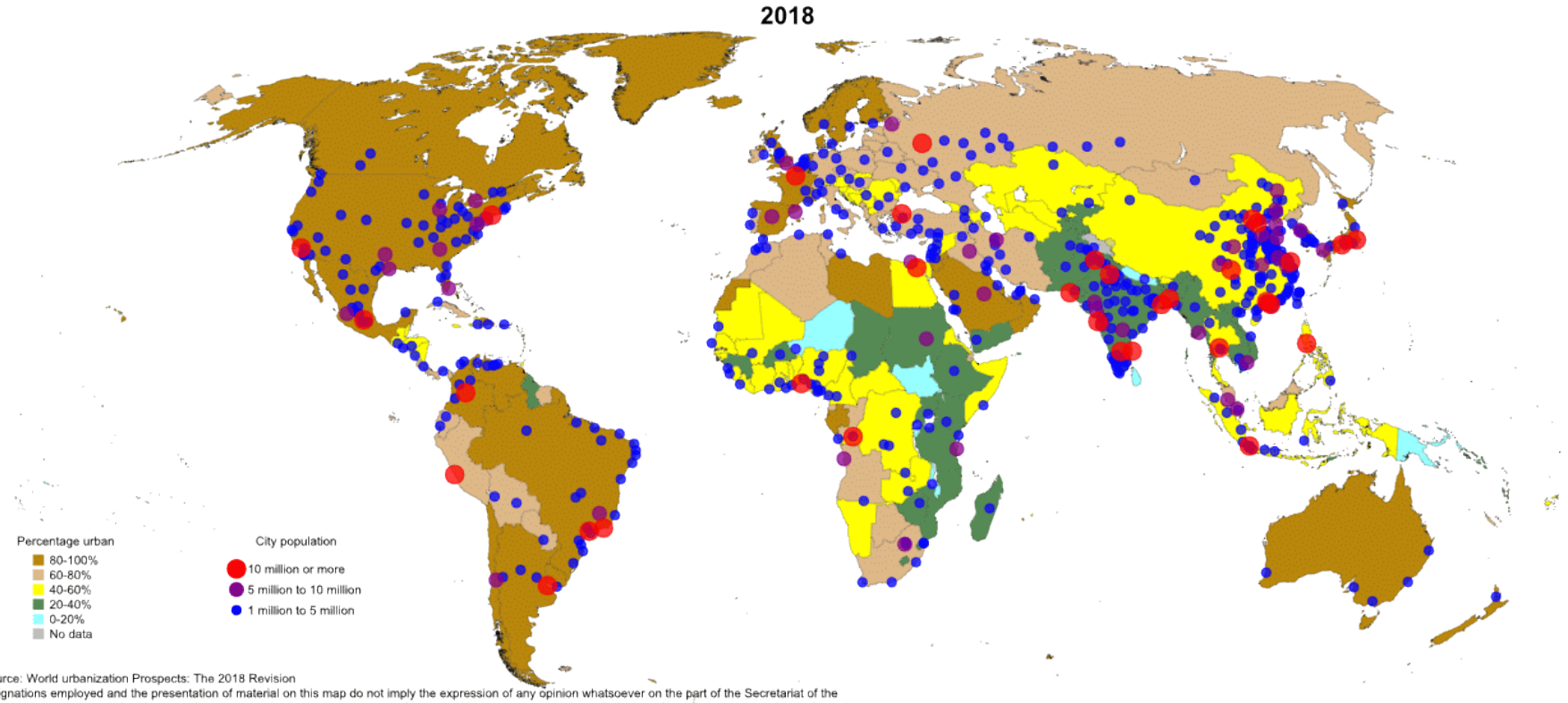
Urban percentage and cities > 1 million



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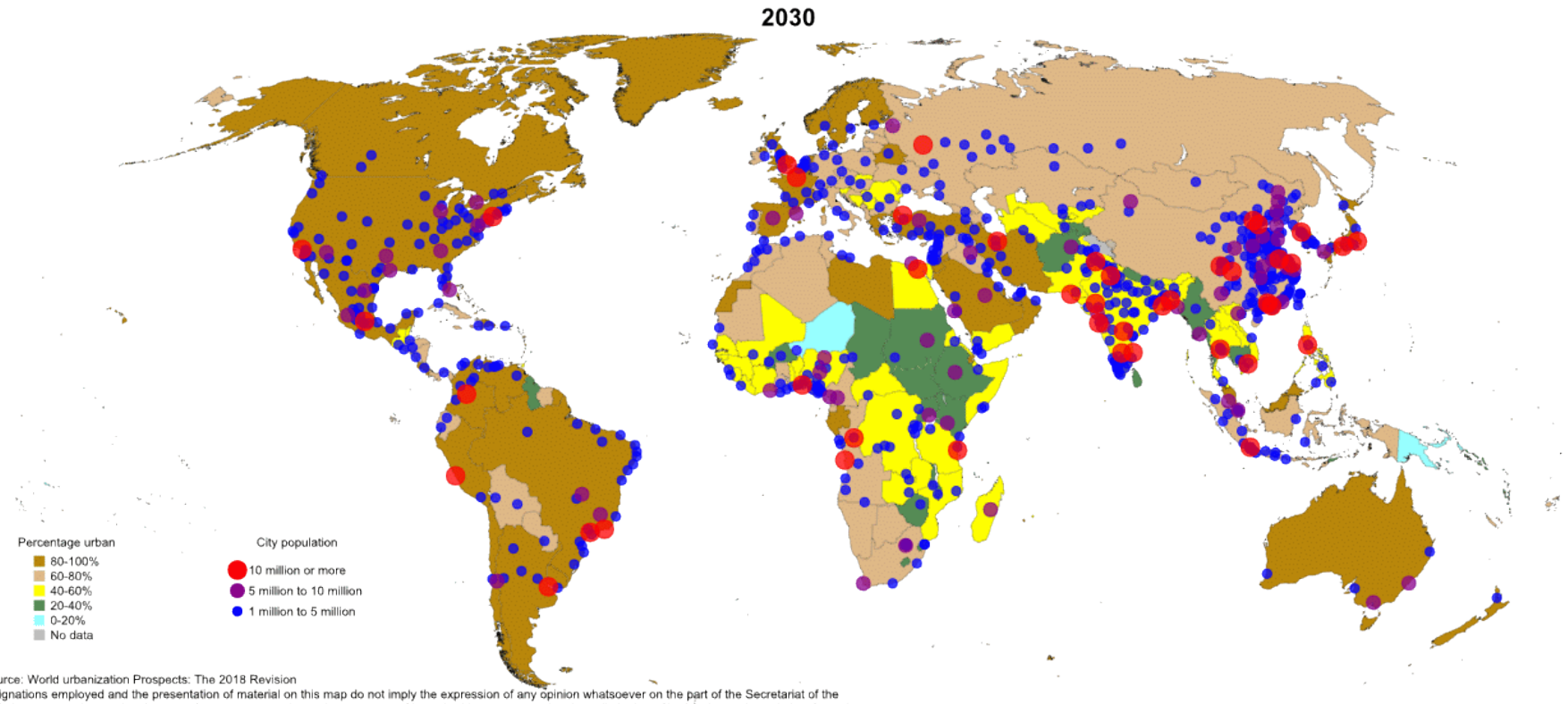

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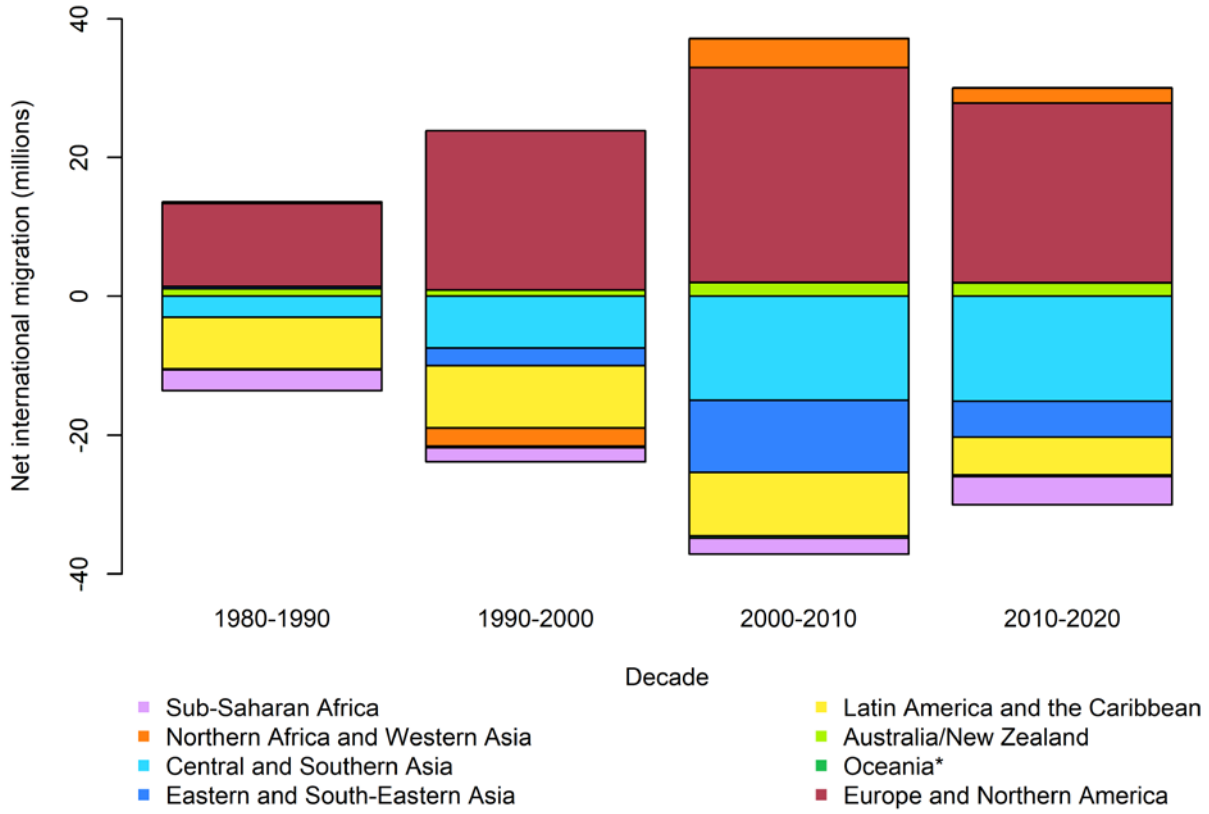
Net international migration has increased since 1980s

- Most international migration is directed to Europe and Northern America
- Main regions of origin are Central and Southern Asia, followed by Eastern and South-Eastern Asia and Latin America and the Caribbean



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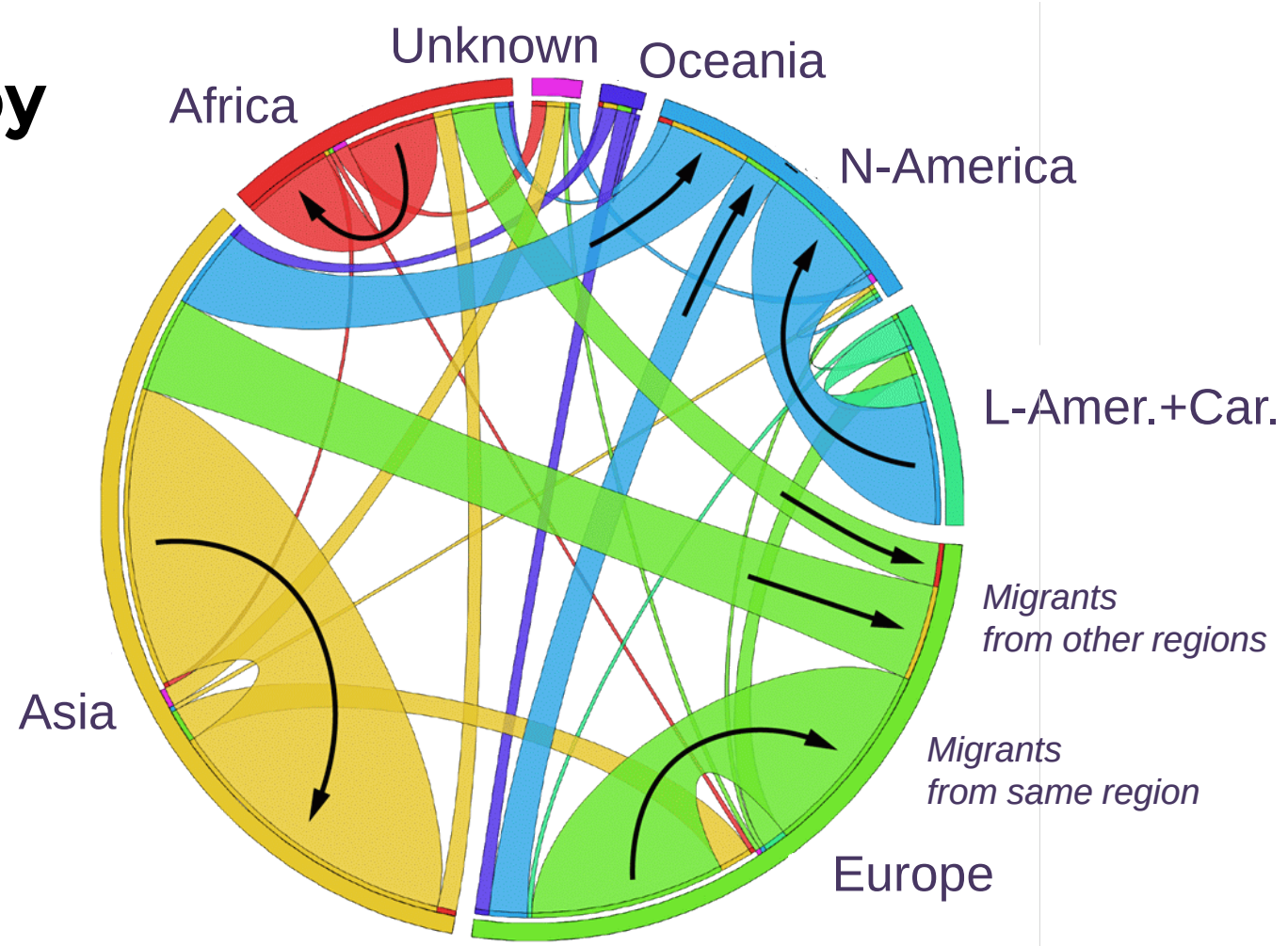
International migrants by regions of origin and destination, 2017

- Most migration takes place within Regions
- Substantive flows of migration are directed to Europe from Asia and Africa and to Northern America from Asia and Europe



Methods of UN population projections

- Calculations using a cohort-component approach
- Assumptions about future trends of fertility and mortality are derived primarily from past trends for a given country
- Also informed by theories of demographic change and by historical experience of other countries
- Alternative future trends have traditionally been described using variants and scenarios
- Alternative future trends are now also depicted using a probabilistic model

Theory-based methods

- Theories of the demographic transition share certain common points about the historical decline of fertility and mortality, which are reflected in the structure of the United Nations projection model
- For fertility, there is a transition from high to low values of TFR, typically followed by fluctuations and a modest recovery (below 2.0)
- For mortality, the increase of life expectancy at birth follows an S-curve (slow-rapid-slow change), which remains positive and roughly linear in the final phase

Using historical evidence

- UN projections of fertility and mortality are guided by historical trends in those same variables
- Regularities in historical trends have led to theories of demographic change, which give structure to the projection model
- Model is calibrated for each country using an estimation procedure that relies primarily on data for that country
- Data for other countries influence estimates especially for countries in which the transition is less complete

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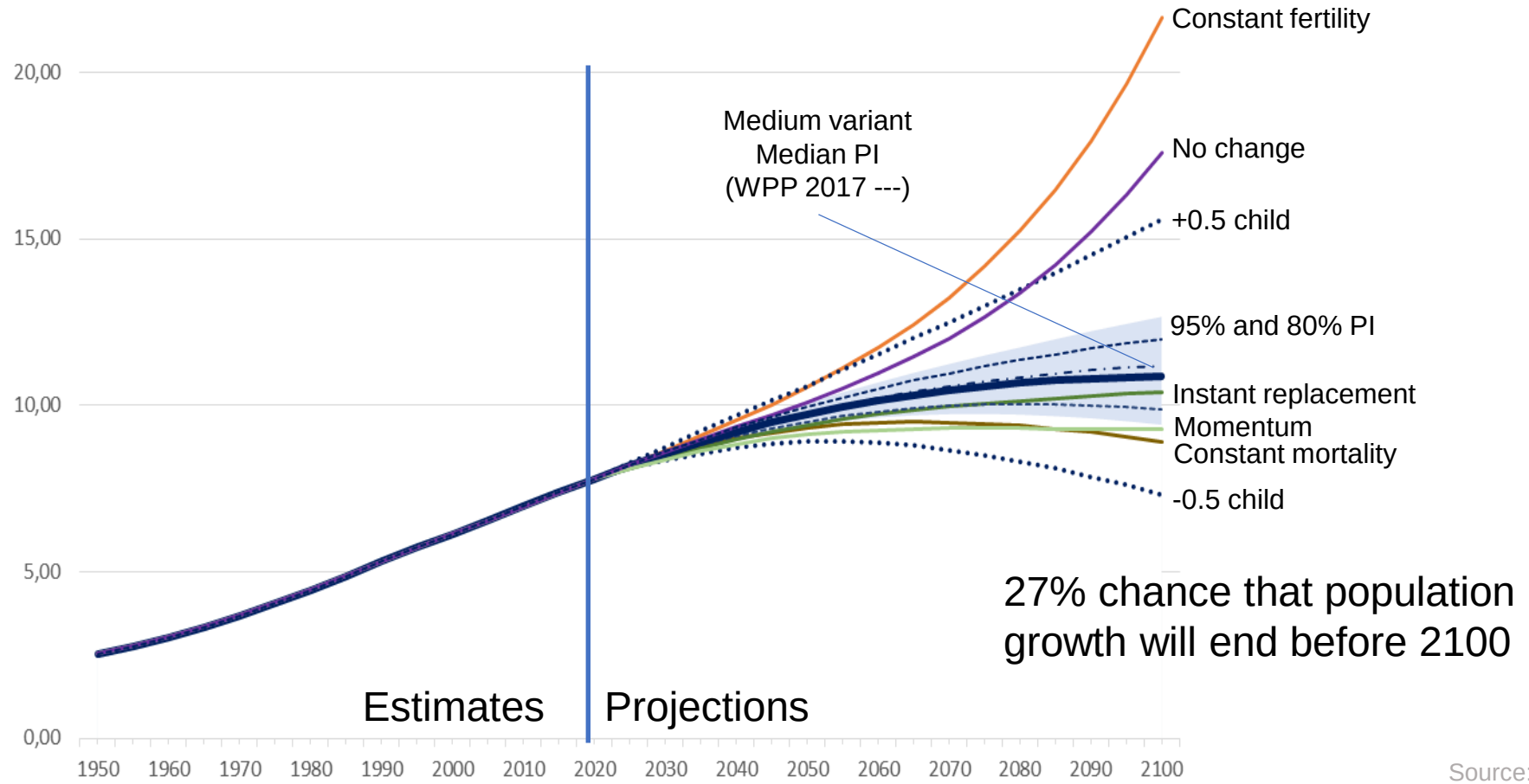
World population 1950-2100, different variants



Source: WPP 2019

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World population 2020-2100, different variants

Variant/Scenario	2020	2050	2100	Difference 2100 (in per cent)
No change		10,1	17,6	61,8
High (+0.5 child)		10,6	15,6	43,4
Upper 95 PI		10,1	12,7	16,4
Upper 80 PI		10,0	12,0	10,3
Median WPP 2017	7,8	9,8	11,2	2,8
Median PI (Medium)	**7,8**	**9,7**	**10,9**	
Instant replacement		9,4	10,4	-4,2
Lower 80 PI		9,5	9,9	-9,1
Lower 95 PI		9,4	9,4	-13,3
Momentum		9,1	9,3	-14,6
Constant mortality		9,3	8,9	-17,9
Low (-0.5 child)		8,9	7,3	-32,7

Source: WPP 2019

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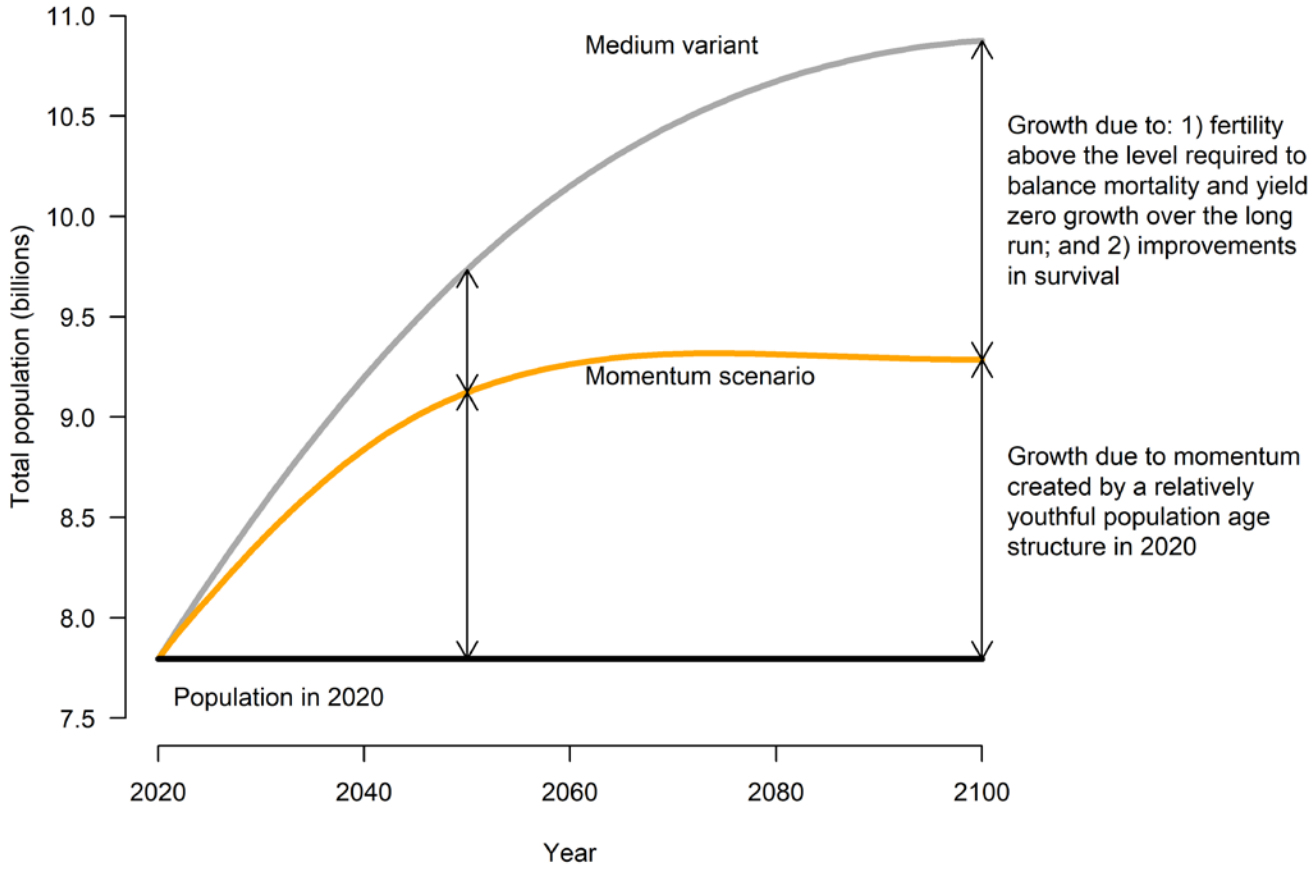
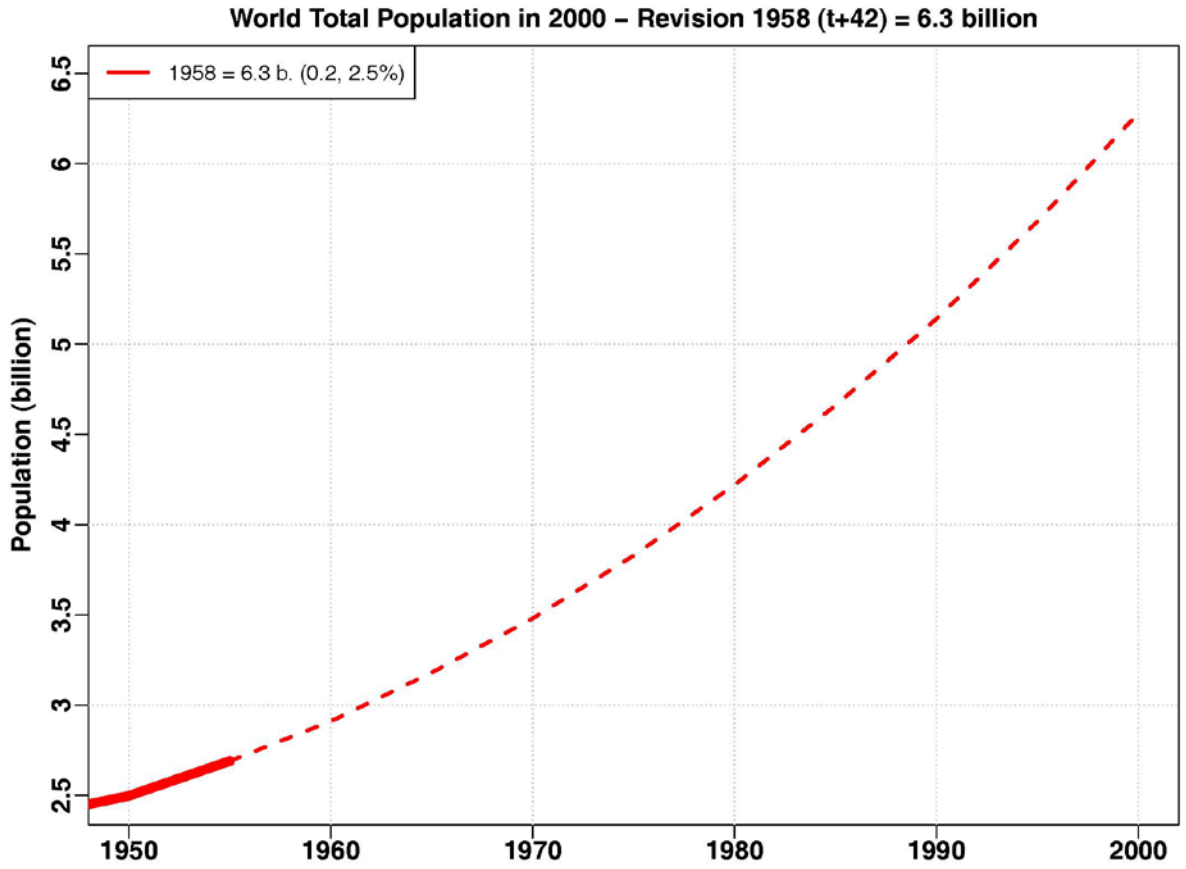
Momentum scenario vs. medium variant



Source: WPP 2019

Change of medium variant results over revisions



Source: WPP 1958 - 2015

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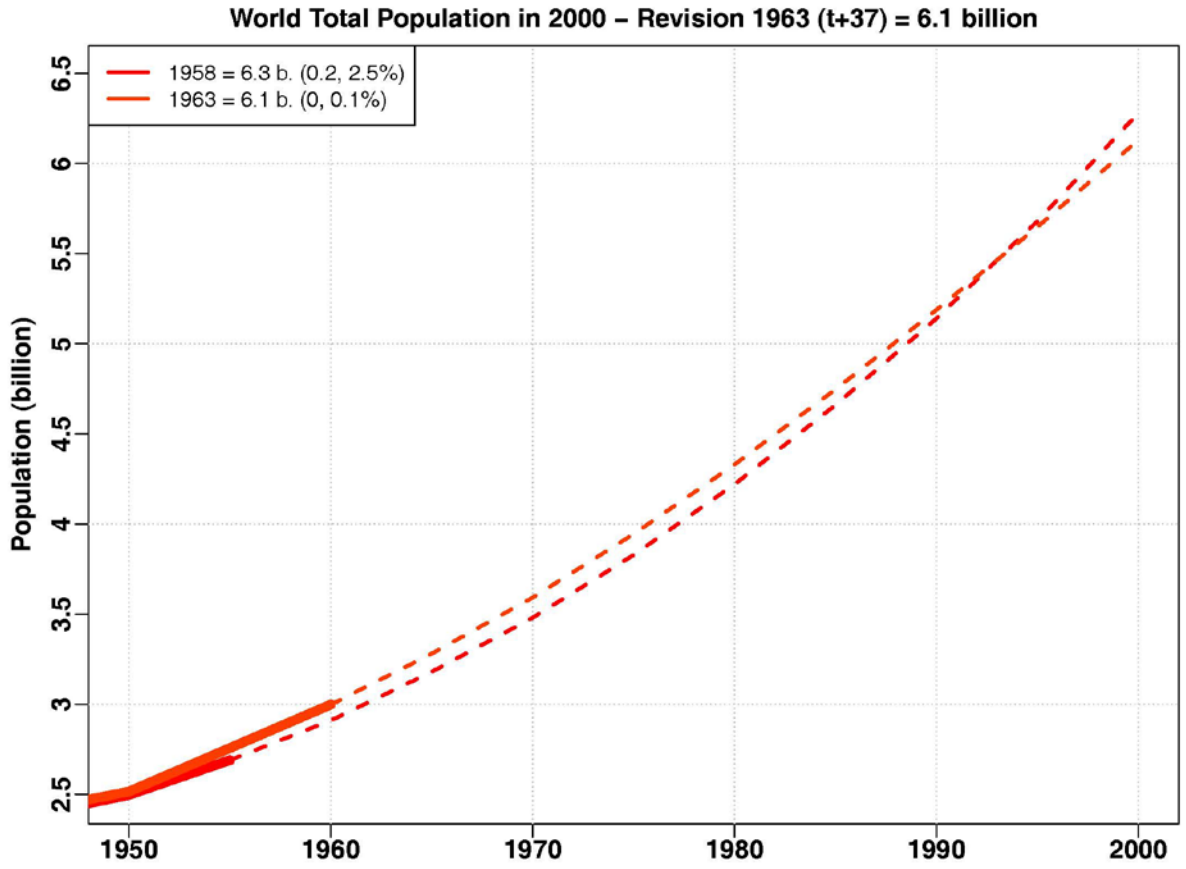

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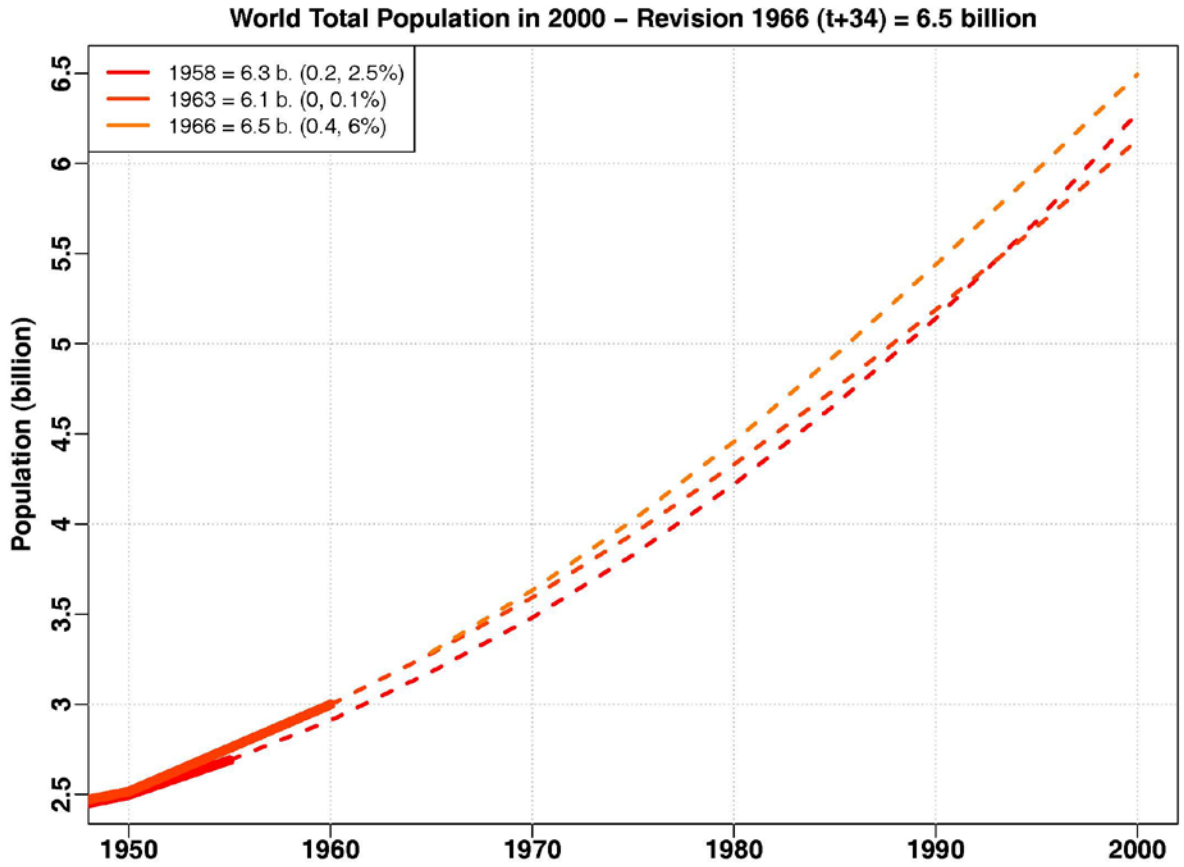

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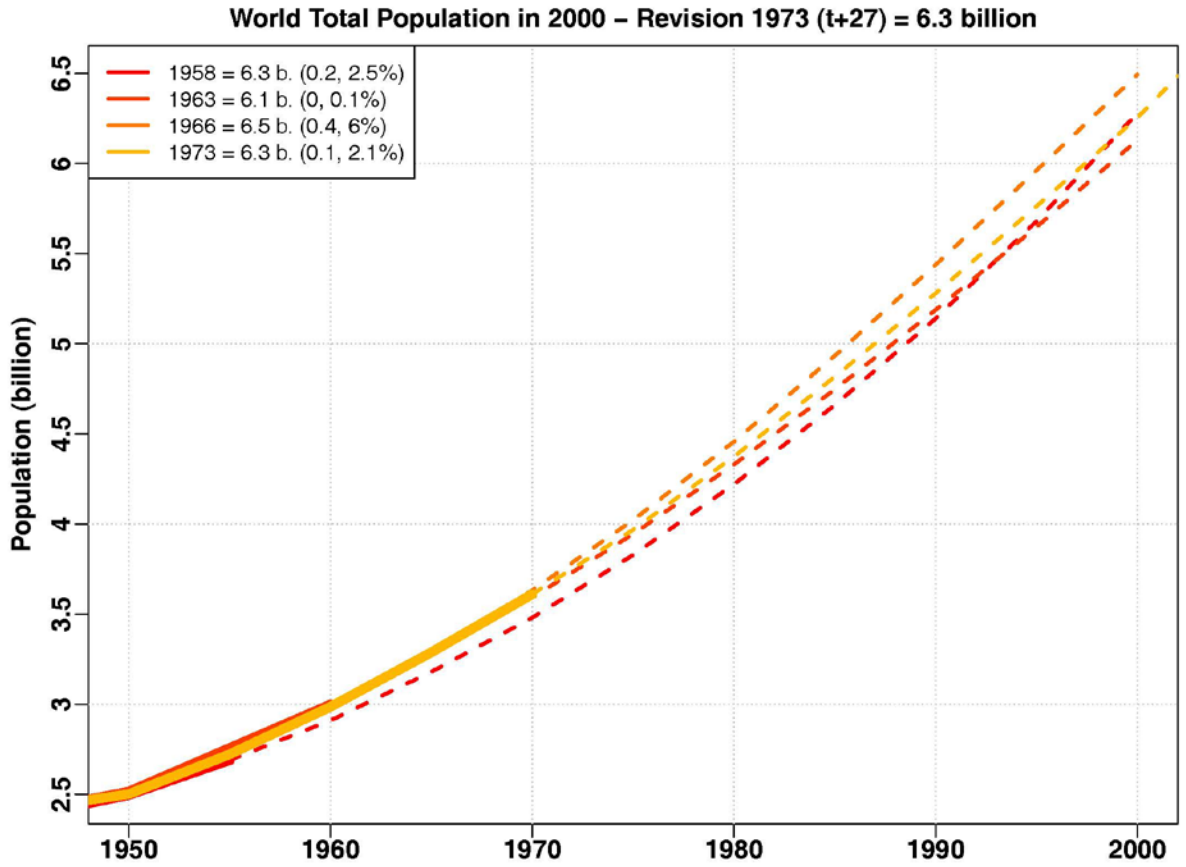

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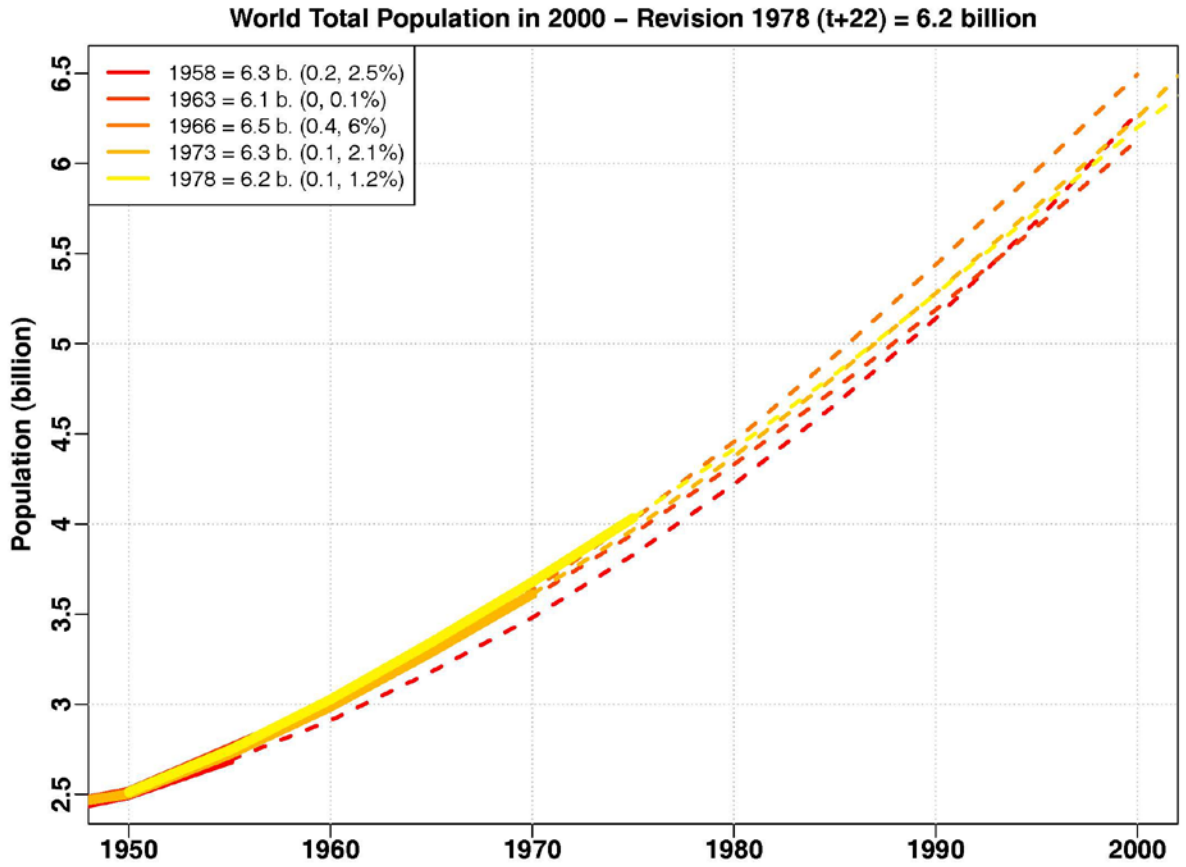

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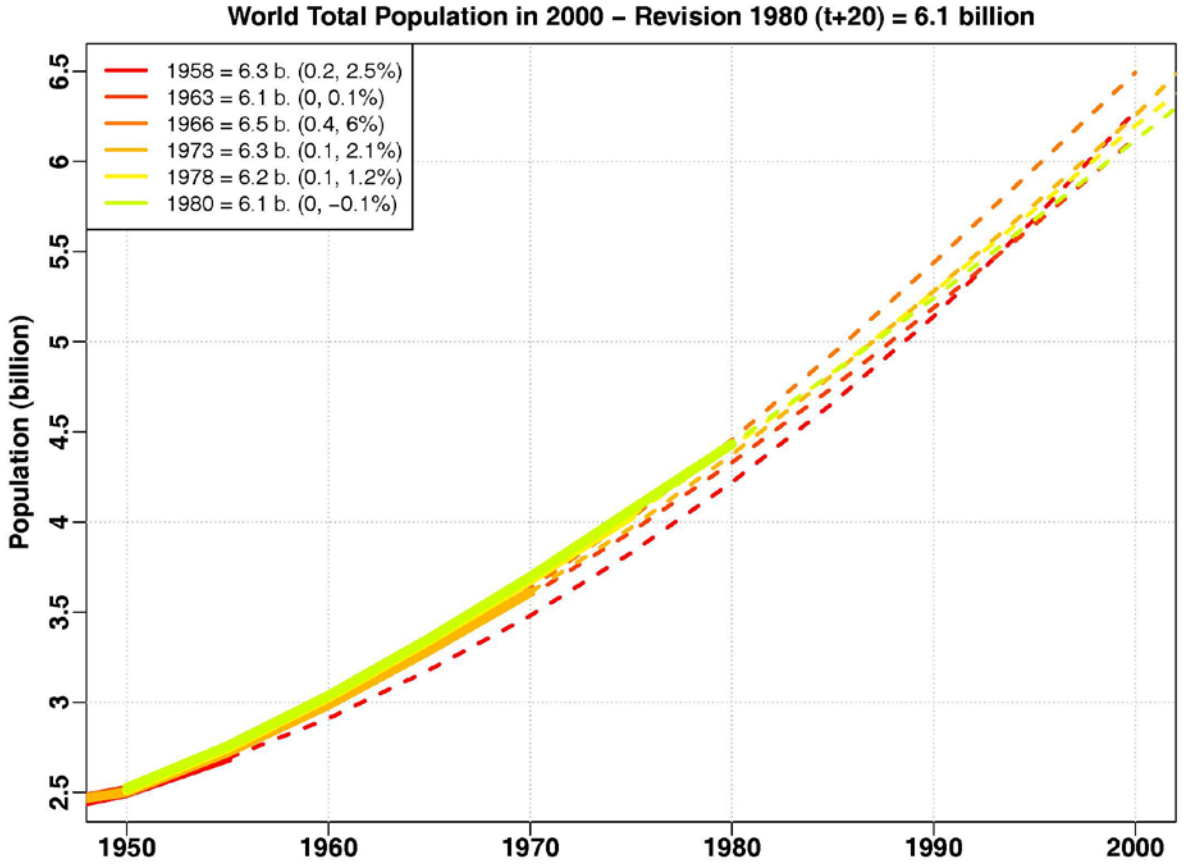

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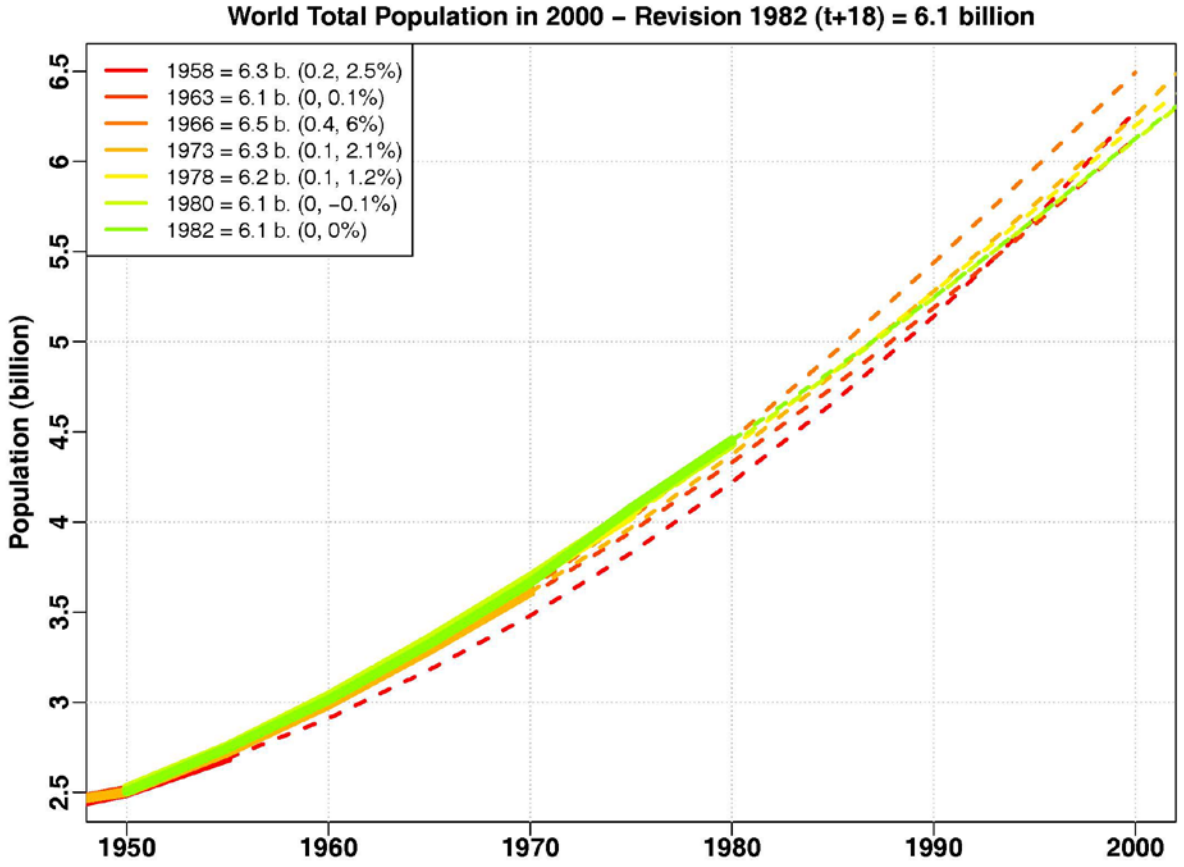

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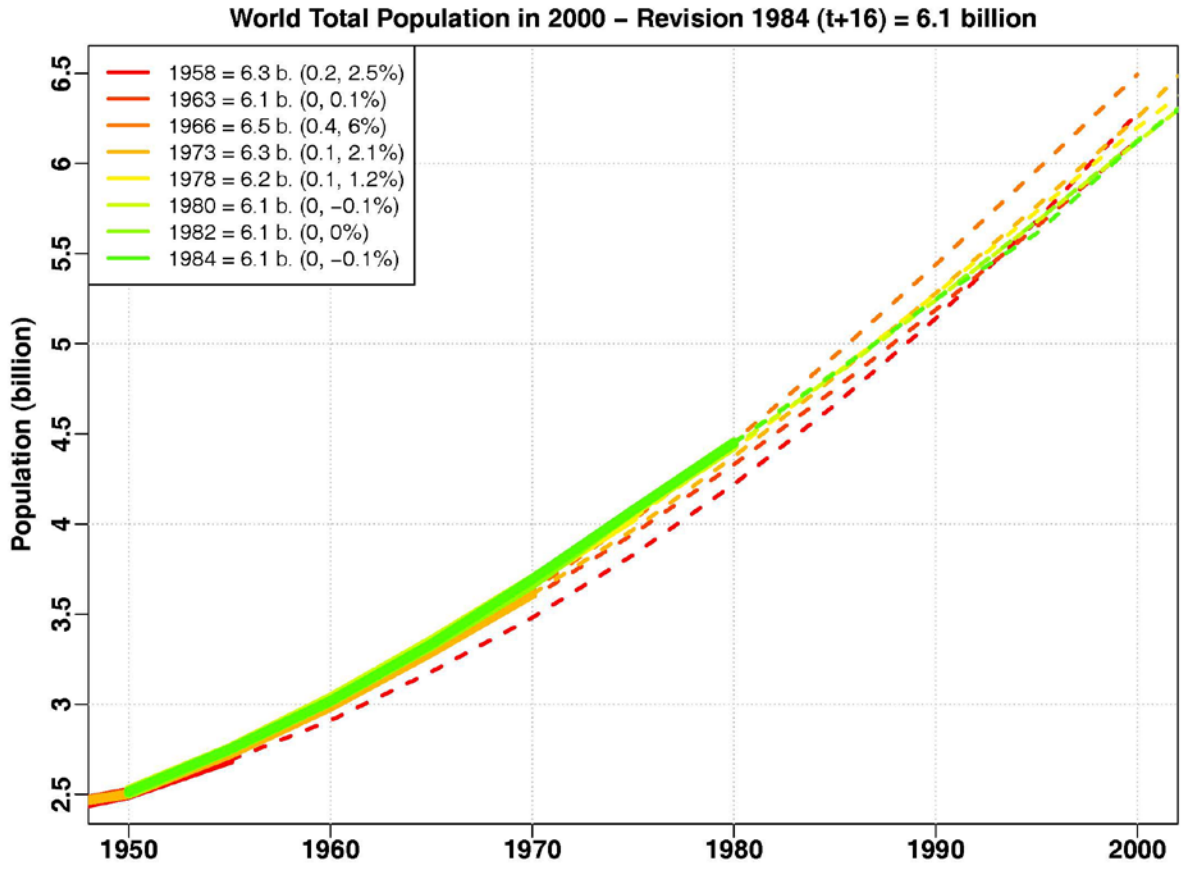

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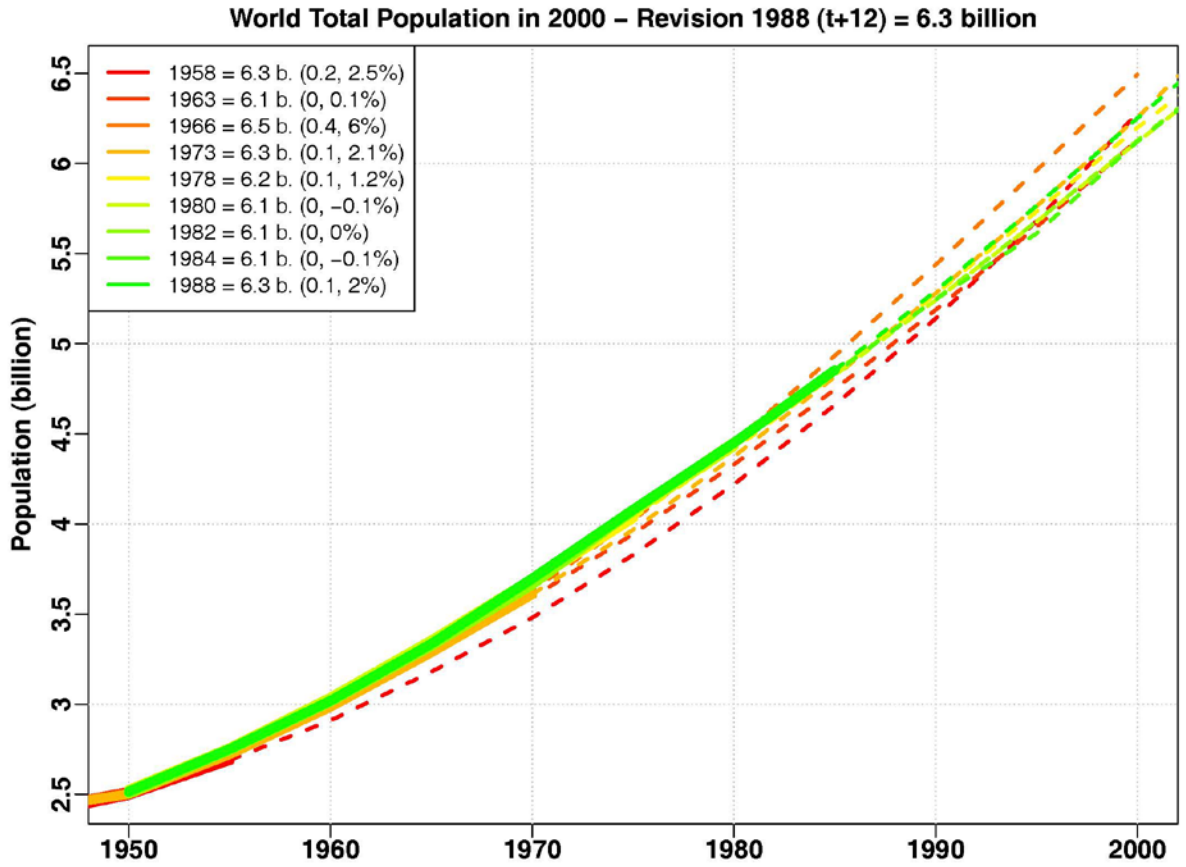

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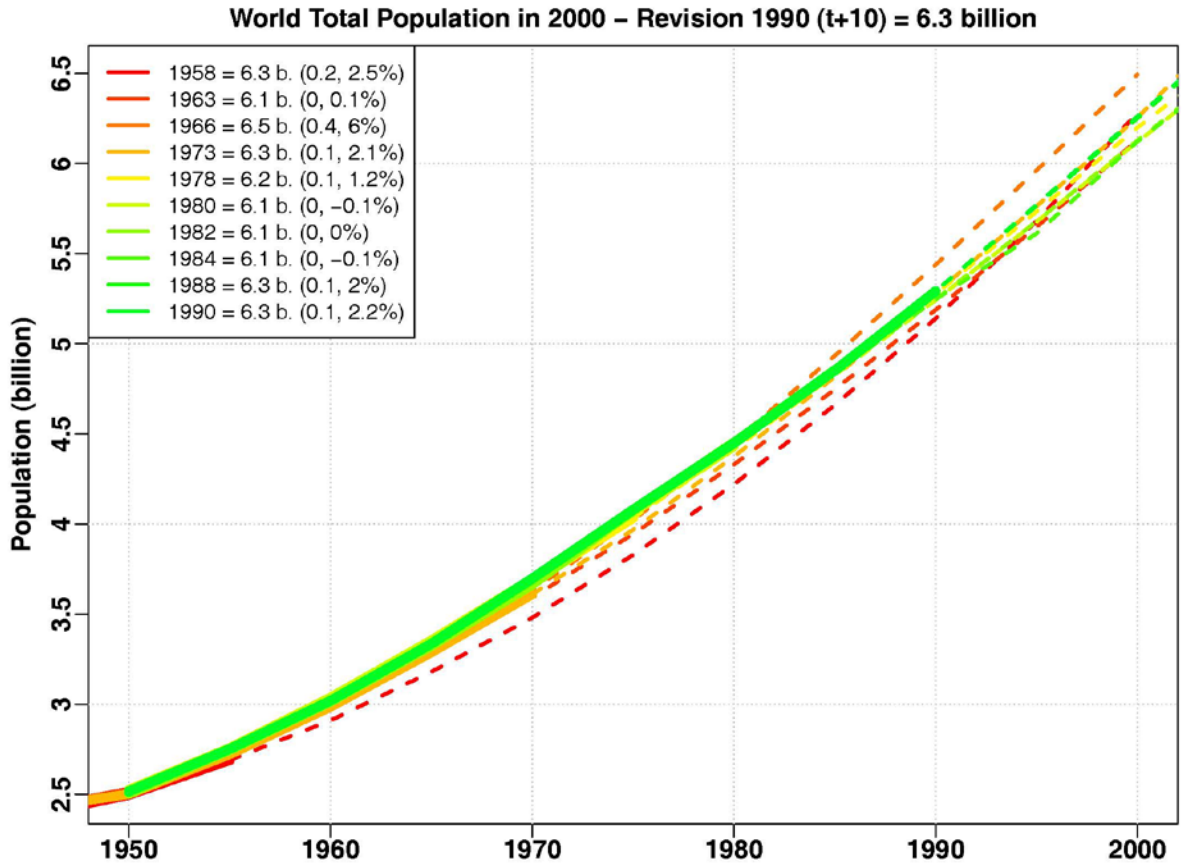

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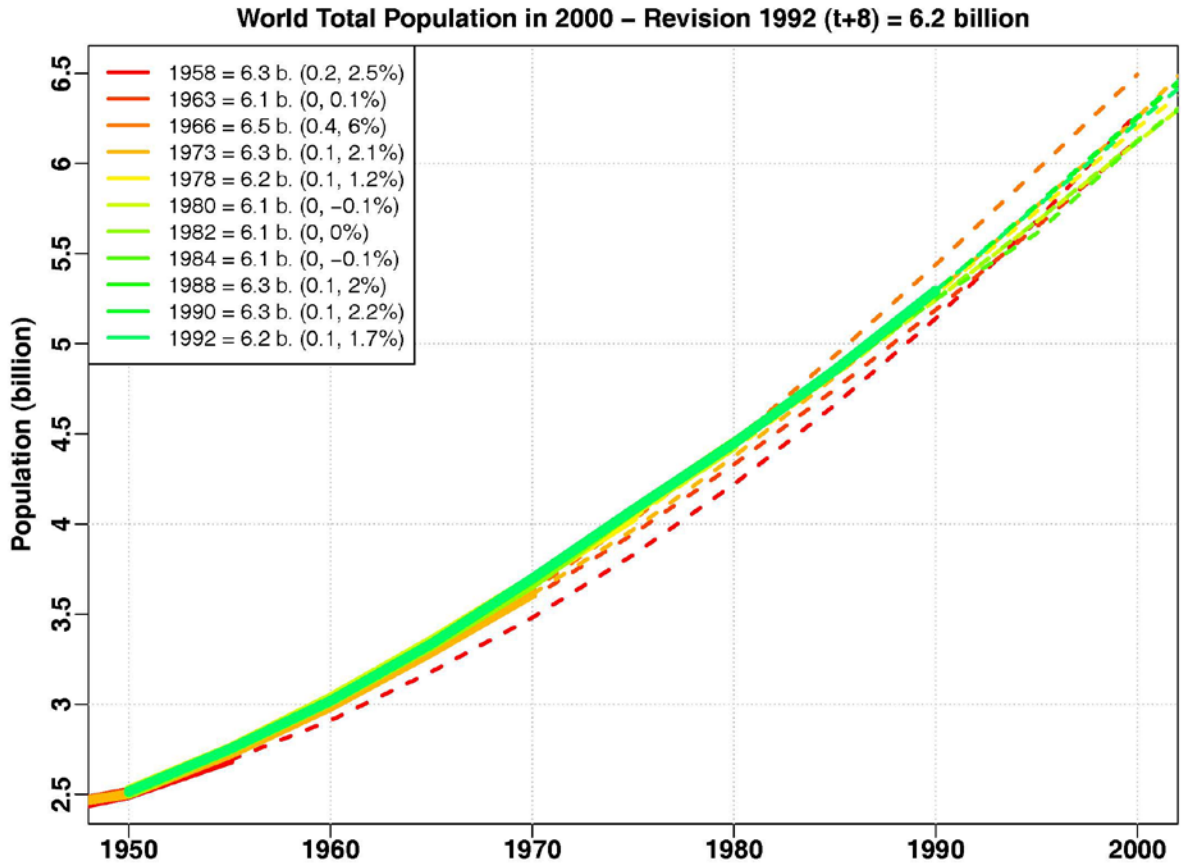

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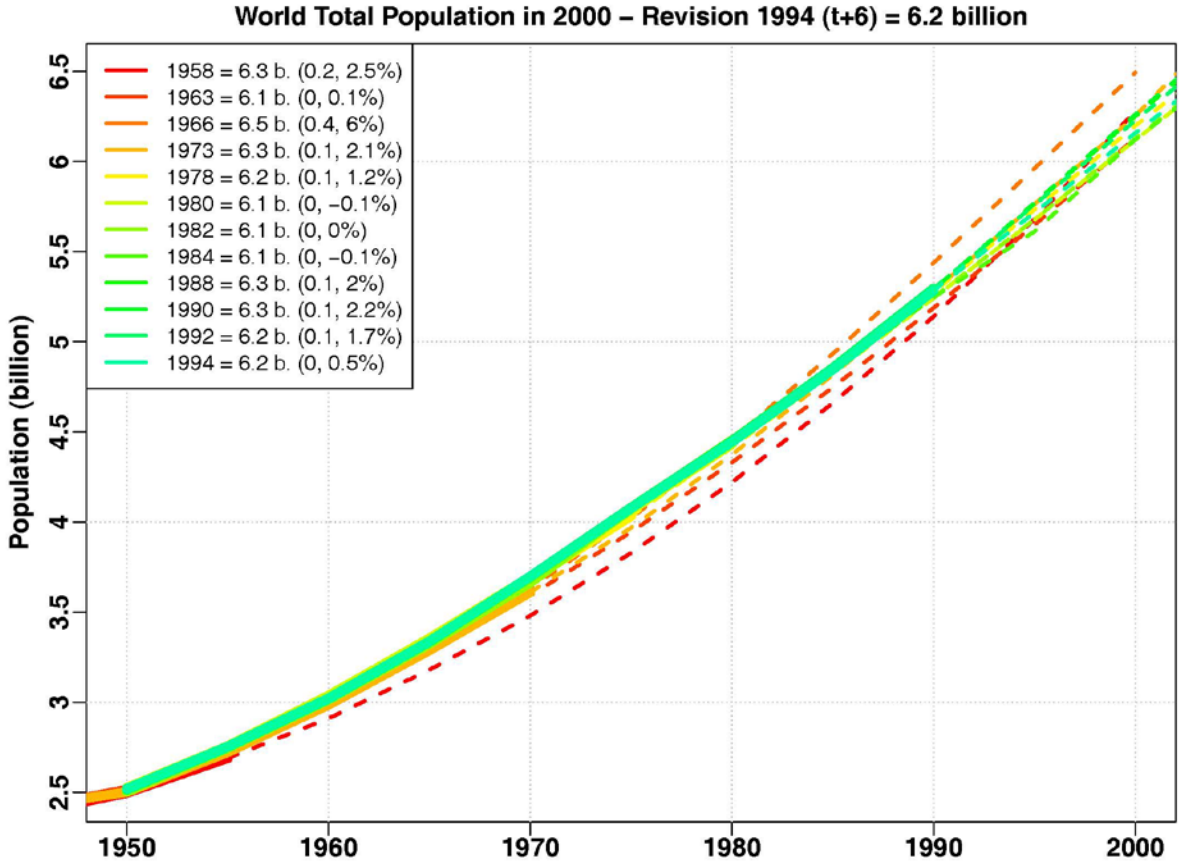

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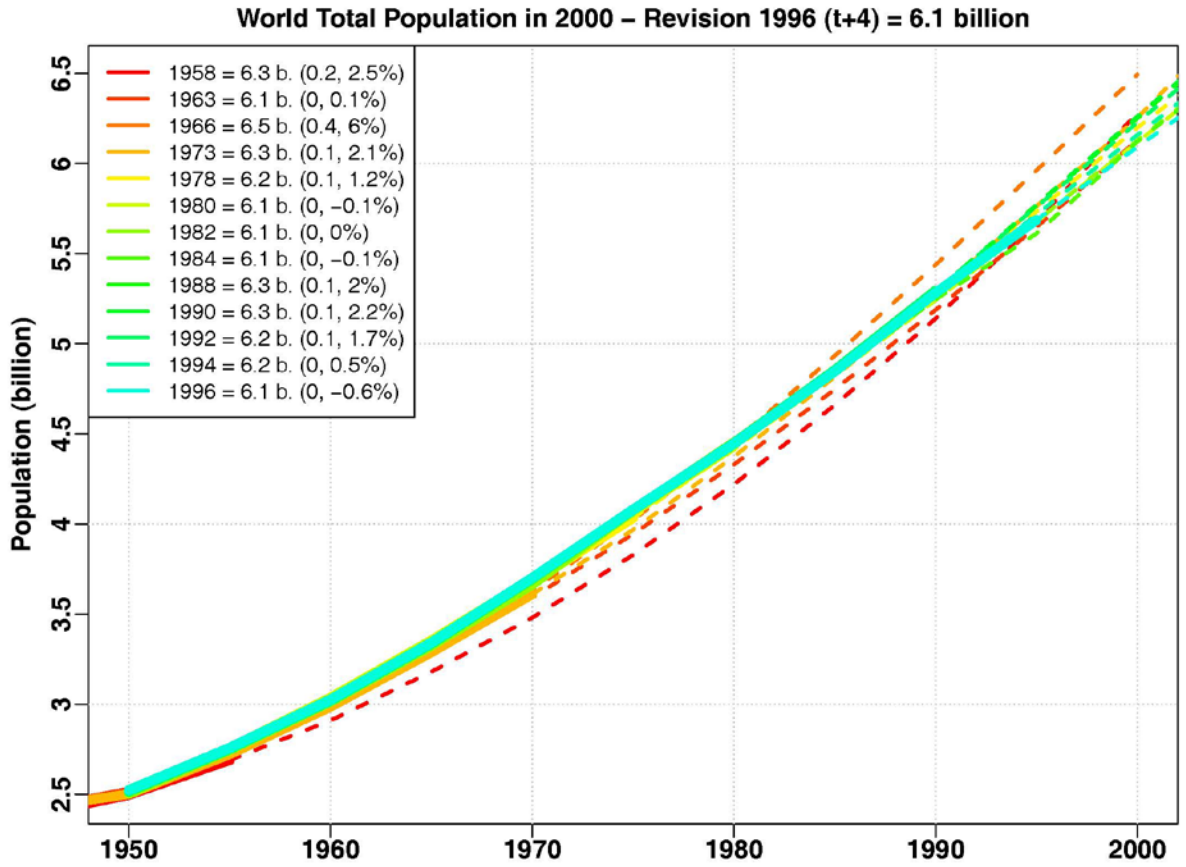

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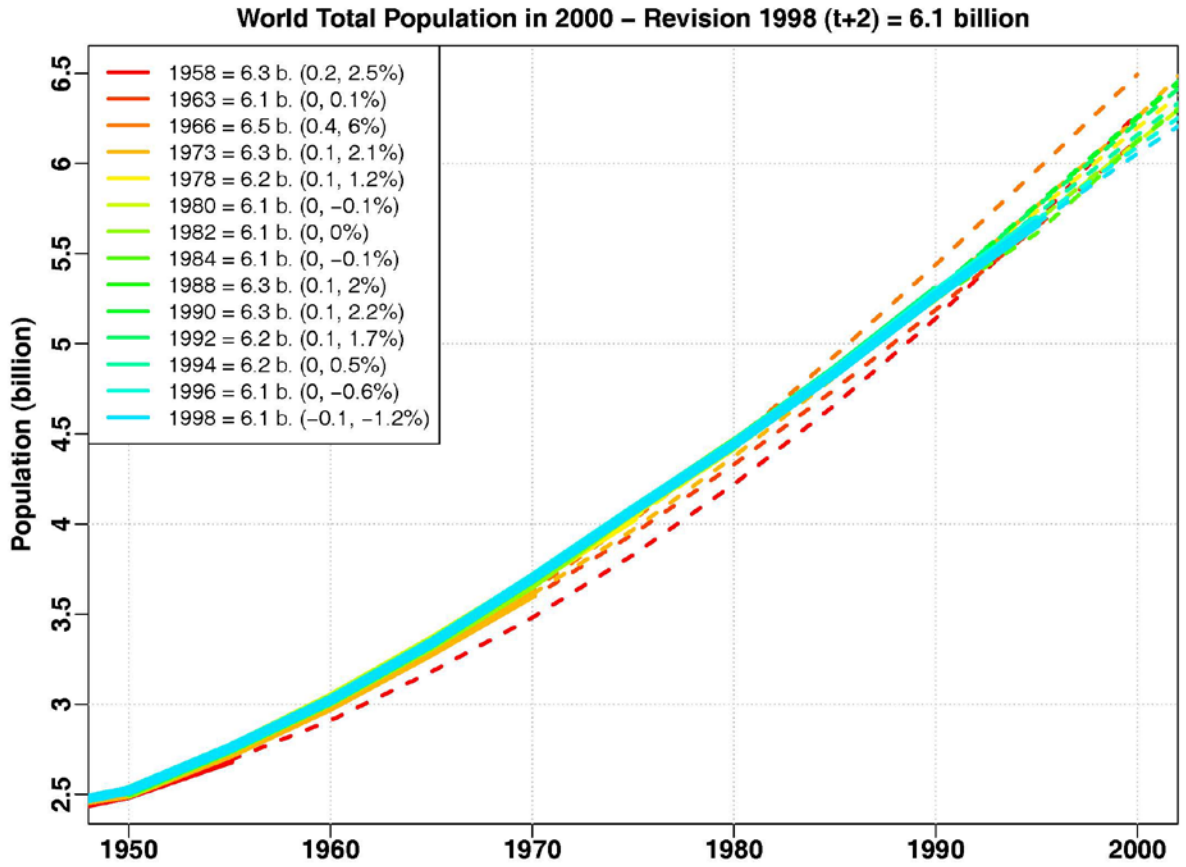

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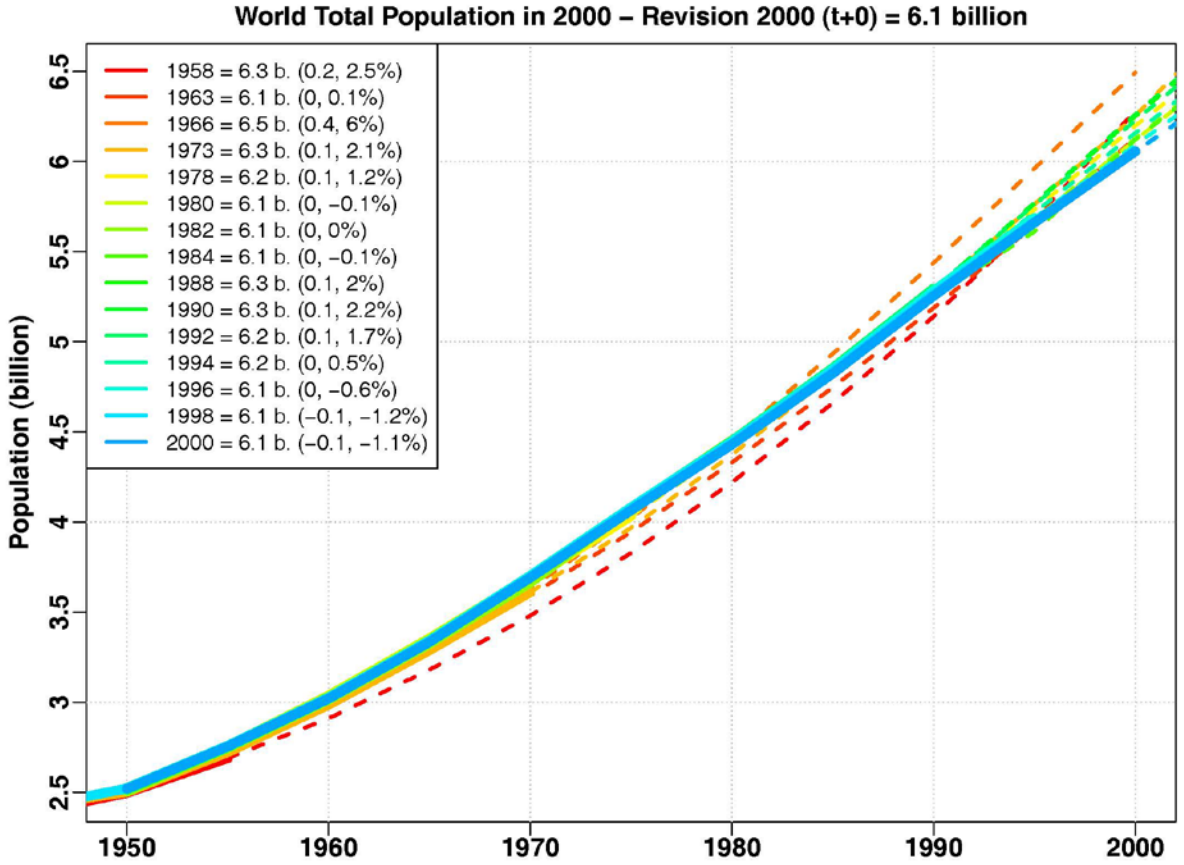

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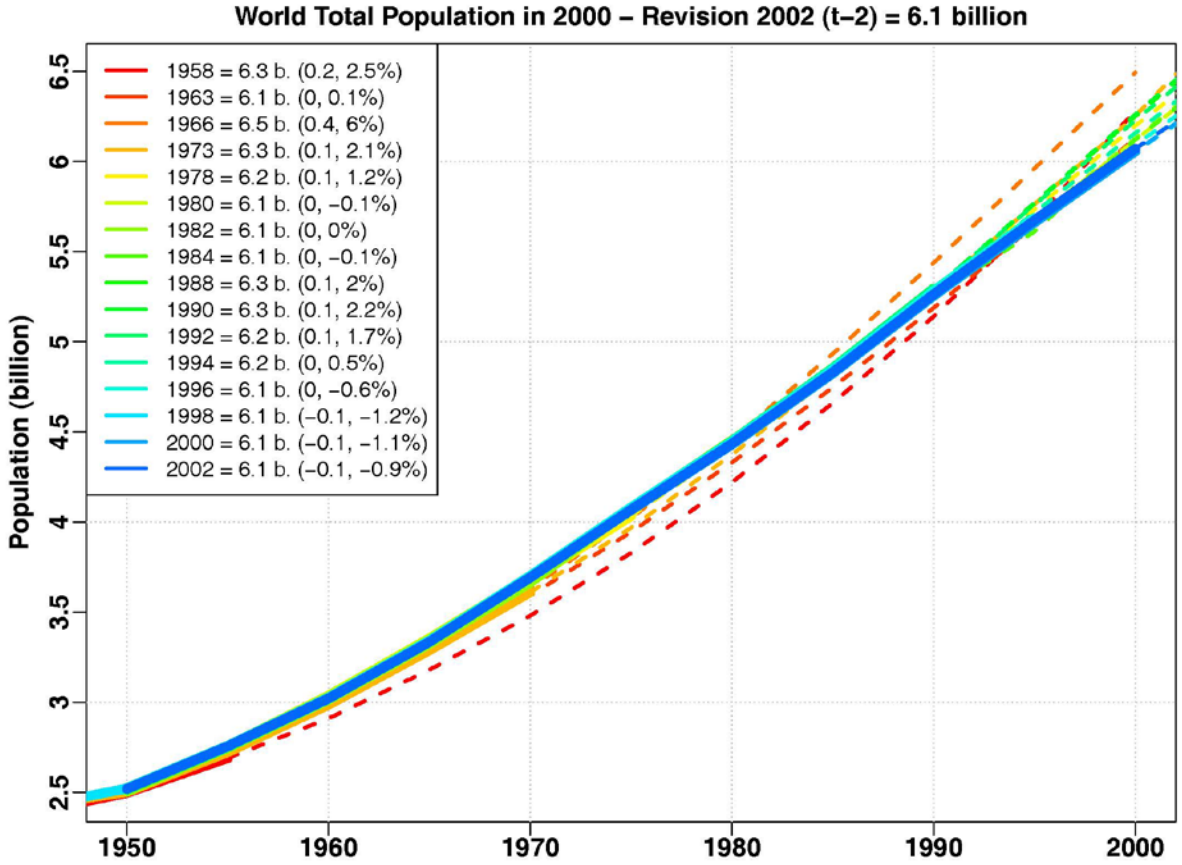

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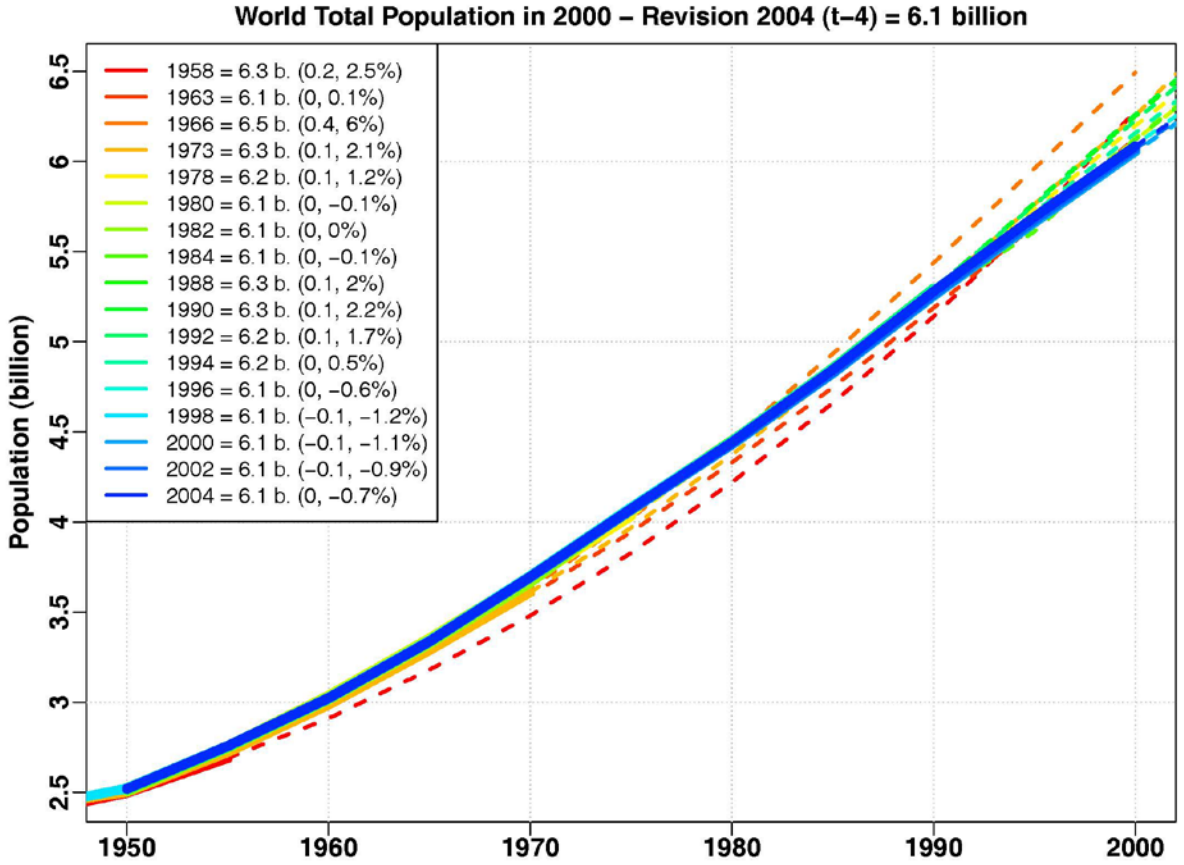

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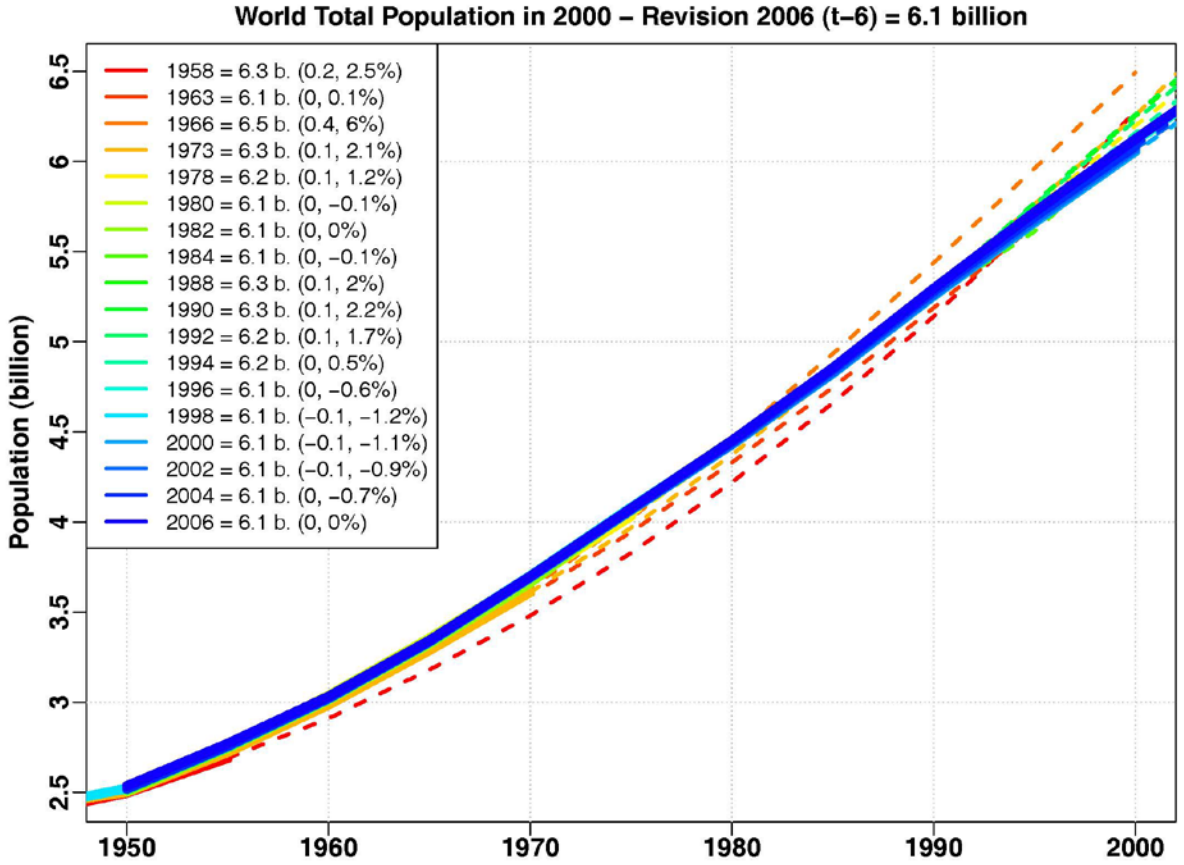

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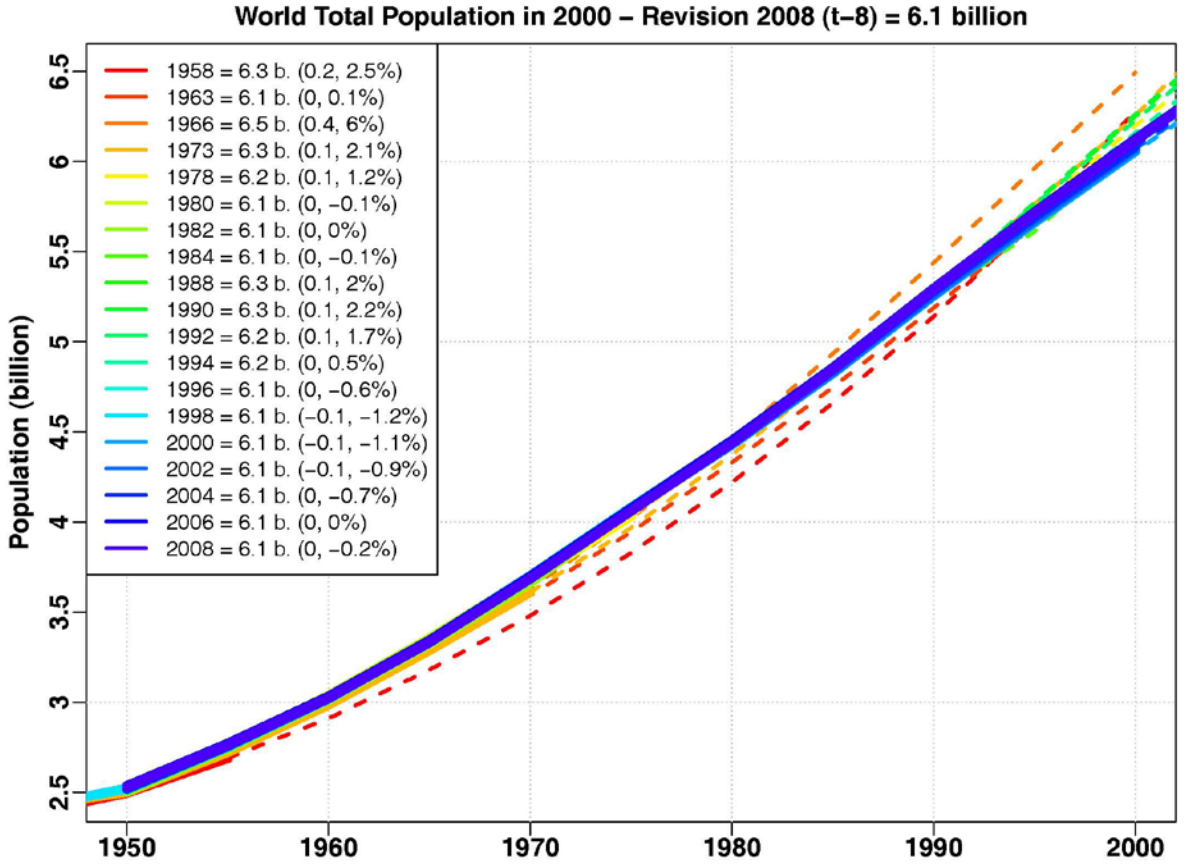

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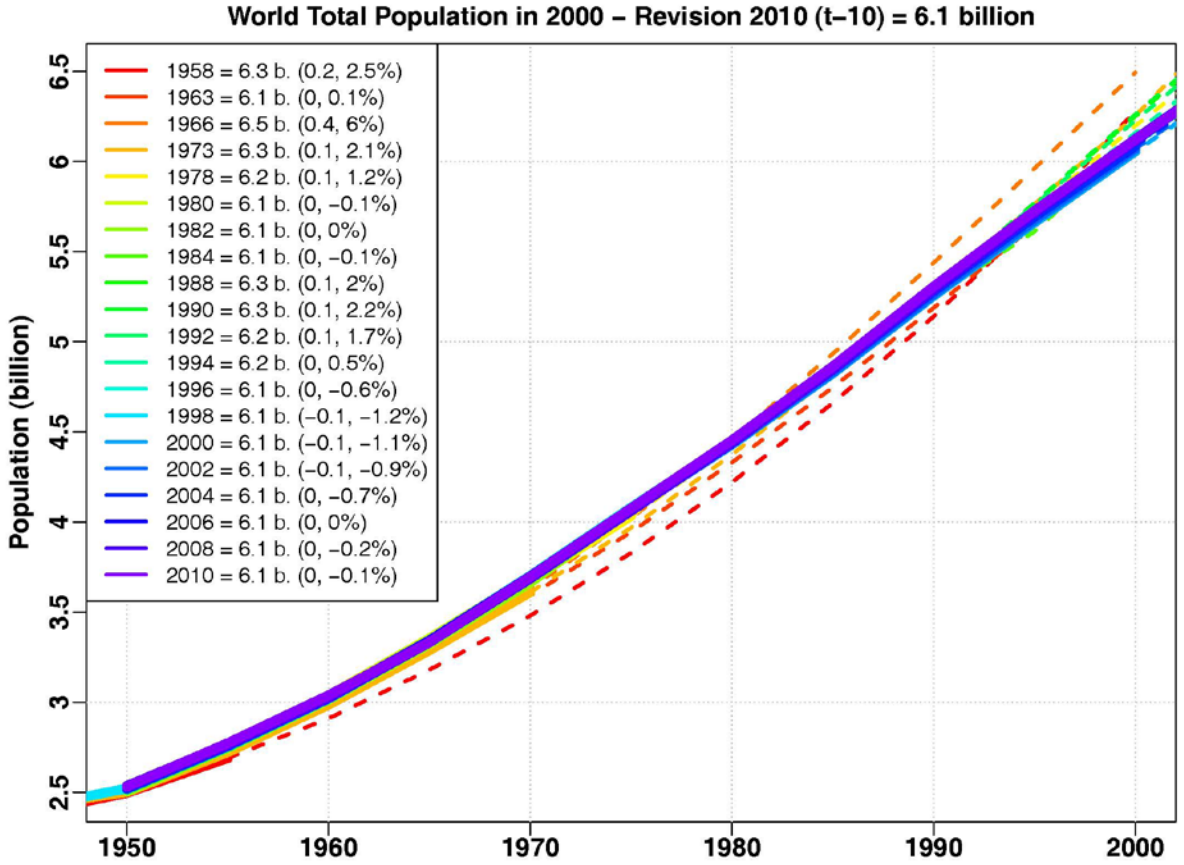

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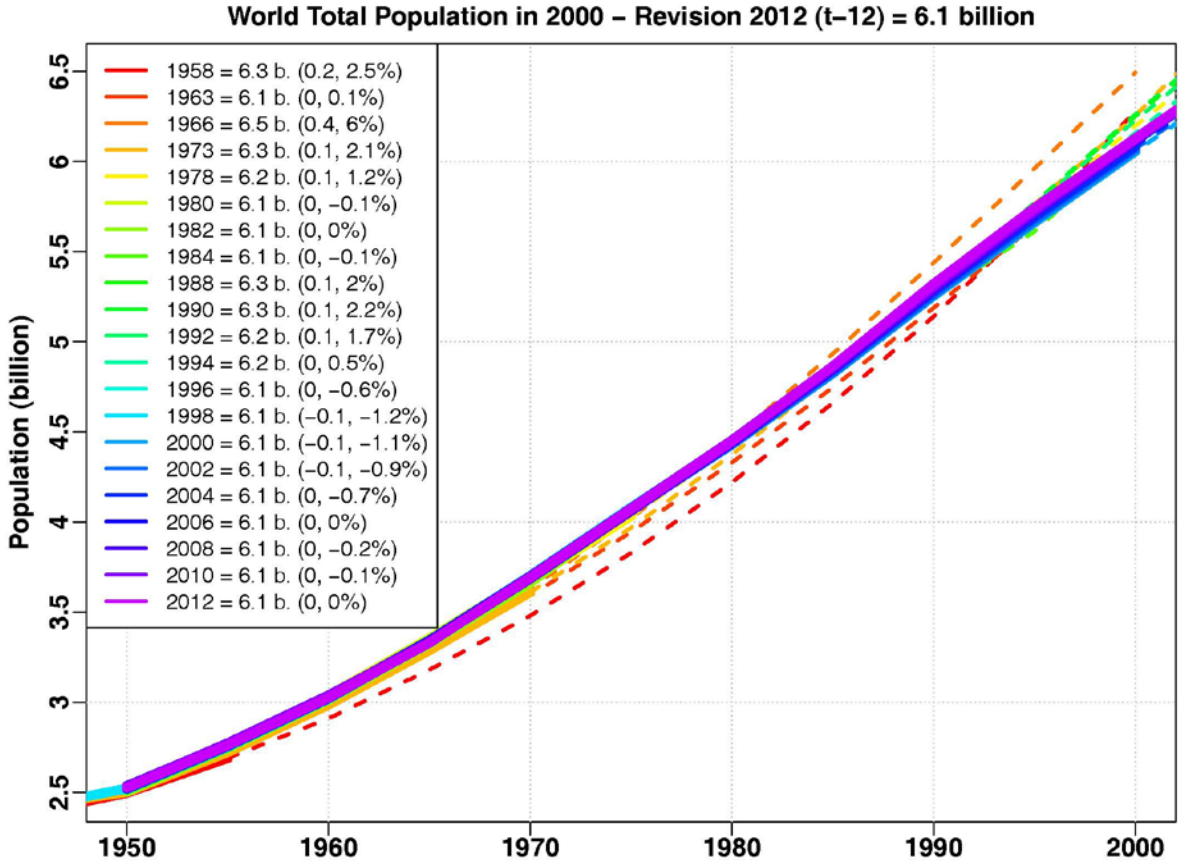

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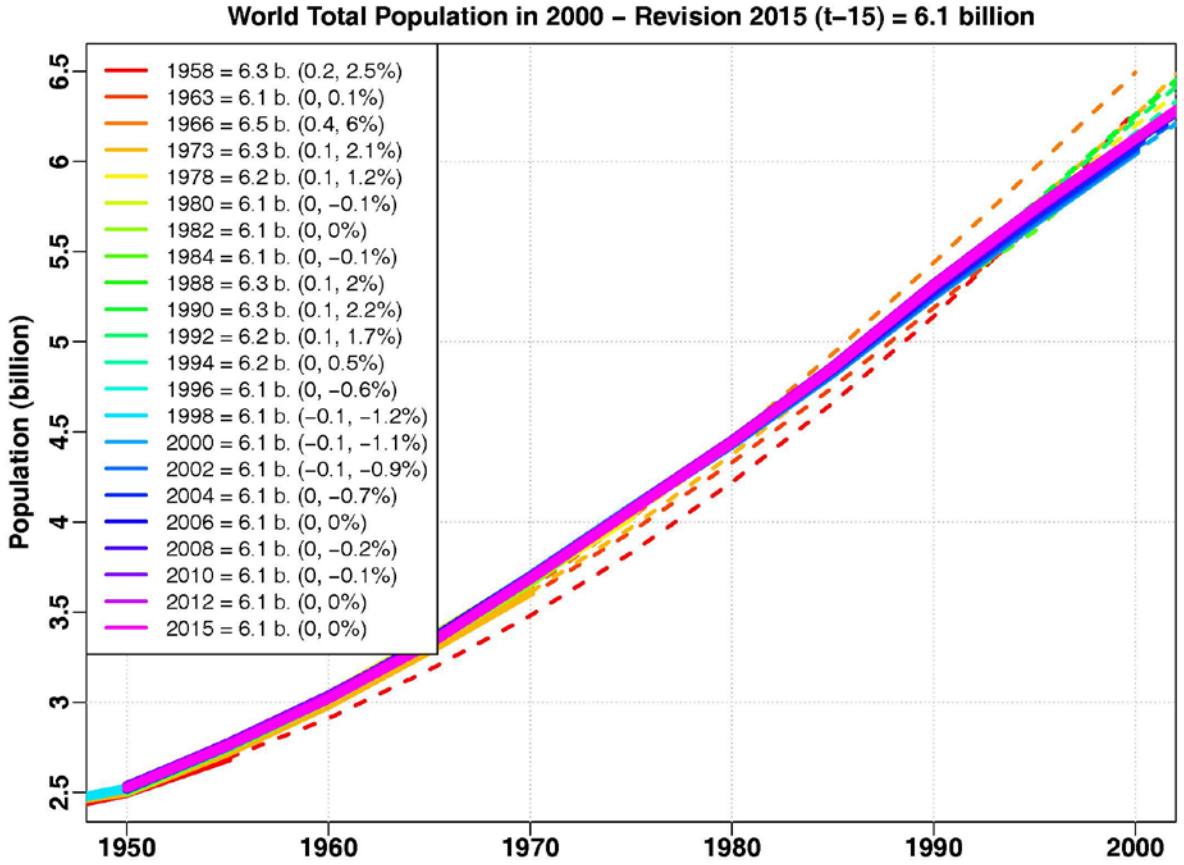

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Conclusions

- Globally, population growth it the dominant trend affecting sustainable development
- Ageing and negative natural (births minus deaths) population balance will affect development in an increasing number of countries, including many in less developed regions (for which migration will have an increasing impact on population dynamics)
- Sub-Saharan Africa is expected to see the largest rise in population of all regions by the end of the century, including an increasing share of population living in urban settlements and an increasing number of large cities
- Uncertainty about future global population growth is reflected in UN WPP methods – even the most optimistic scenario is projecting continued growth till mid century

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