

POPULATION GEOGRAPHY

UNIT II

POPULATION GROWTH TREND

TOTAL POPULATION GROWTH BETWEEN 2020 AND 2100

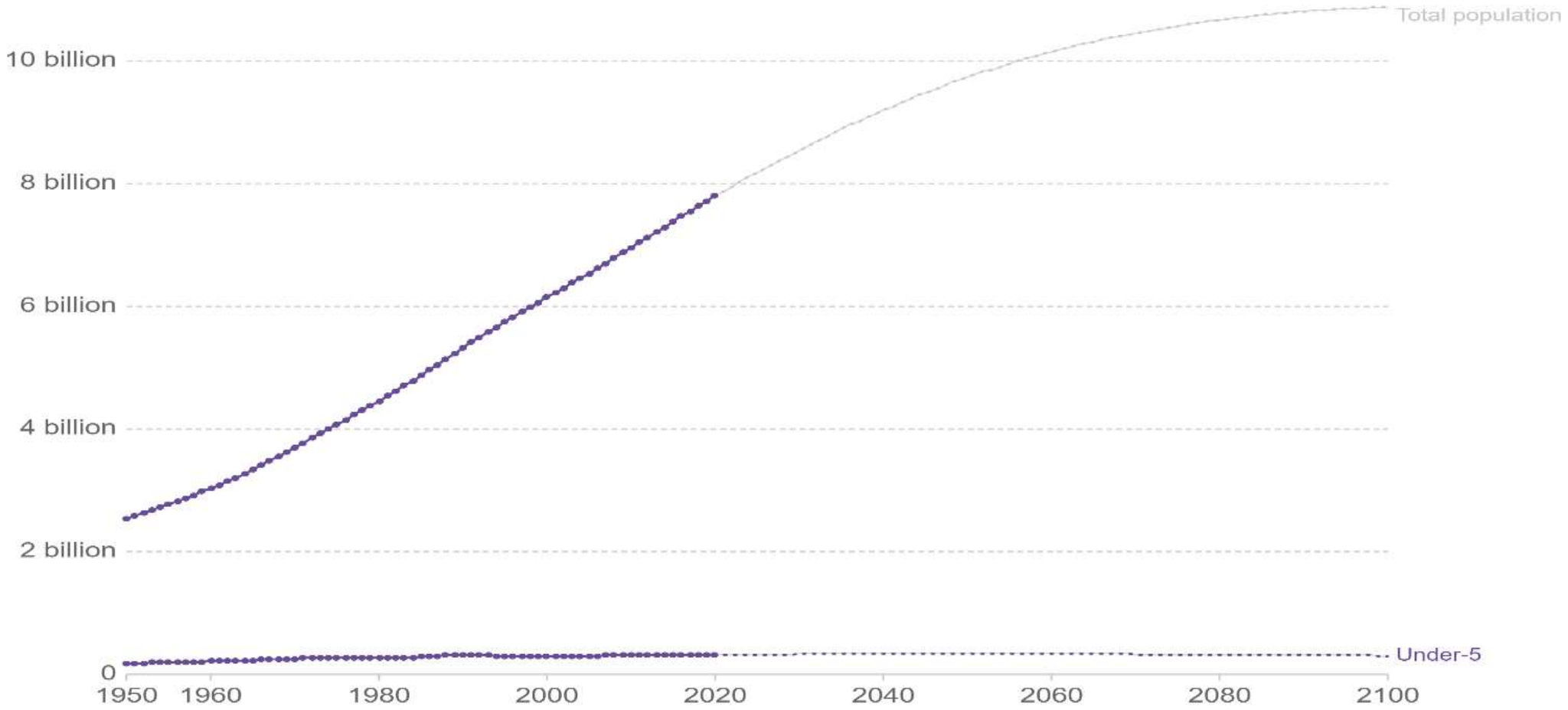
REGION	2020	2100	ABSOLUTE CHANGE	RELATIVE CHANGE
WORLD	7.79 billion	10.88 billion	+3.08 billion	+40%
ASIA	4.64 billion	4.72 billion	+78.85 million	+2%
AFRICA	1.34 billion	4.28 billion	+2.94 billion	+219%
EUROPE	747.64 million	629.56 million	-118.07 million	-16%
NORTH AMERICA	368.87 million	490.89 million	+122.02 million	+33%
SOUTH AMERICA	430.76 million	429.30 million	-1.46 million	-1%
AUSTRALIA	30.32 million	48.89 million	+18.56 million	+61%

TOTAL POPULATION GROWTH (UNDER AGE 5) BETWEEN 2020 AND 2100

REGION	2020	2100	ABSOLUTE CHANGE	RELATIVE CHANGE
WORLD	328.51 million	304.54 million	-23.97 million	-7%
ASIA	173.55 million	108.67 million	-64.88 million	-37%
AFRICA	98.41 million	152.31 million	+53.89 million	+55%
EUROPE	19.01 million	14.37 million	-4.64 million	-24%
NORTH AMERICA	10.60 million	12.37 million	+1.7 million	+17%
SOUTH AMERICA	15.76 million	9.26 million	-6.50 million	-41%
AUSTRALIA	877,200	1.19 million	+230,251	+24%

World population and projected growth to 2100 (total population and under 5), World

Projections are based on UN median estimates. The two series correspond to total population and population under age 5.

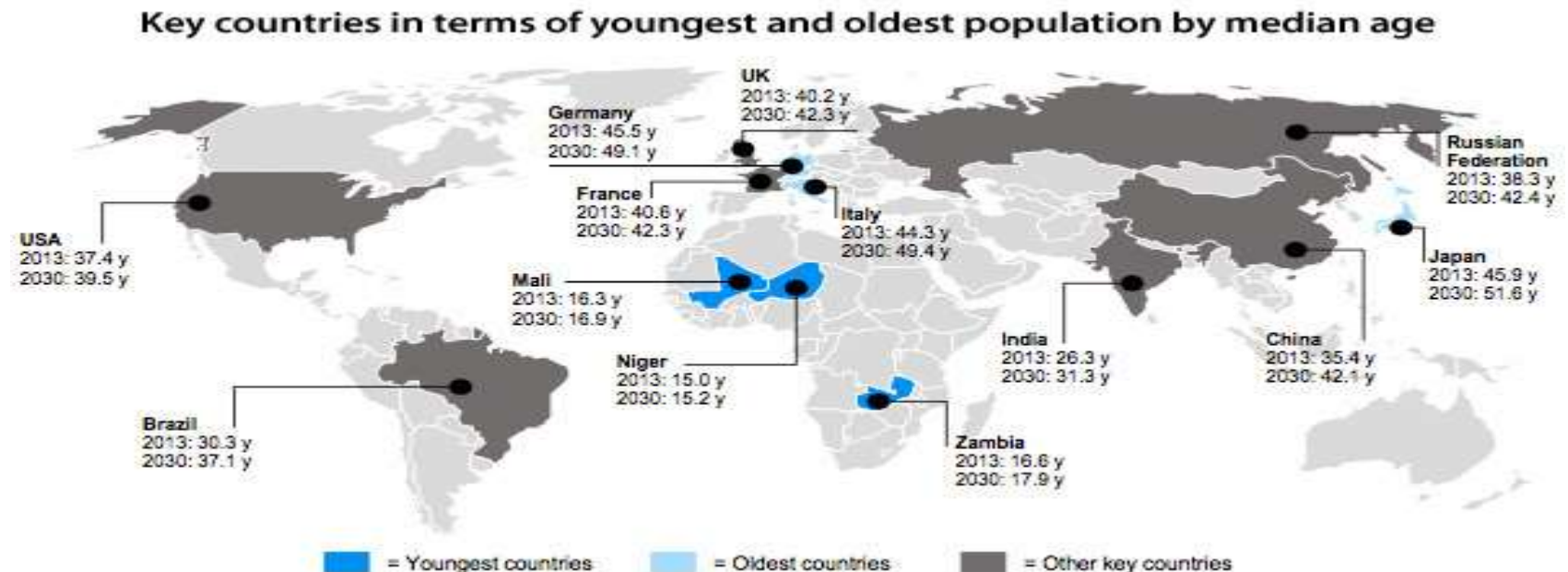


Source: UN Population Division (2019 Revision)

Growing population

The world's population is projected to grow to 8.4 billion by 2030, up 18% on the 7.2 billion today. The rate of growth for the world population is expected to decrease; with an annualised rate of 1.3% i.e 79 million people between 1993 and 2013.

The population growth rates will continue in developing regions, accounting for 97% of the increase to 2030. The world's developing regions will see 1.2 billion people added, a 20.7% increase; while the population of developed countries will increase by 3.3% adding 41 million to the current 1.3 billion people. The regions to see the largest increase in population are India (adding 224.3 million) Nigeria (99.5 million) and China (67.7 million). UK will grow by 5.5 million while Germany will see a decrease of 3.2 million people.

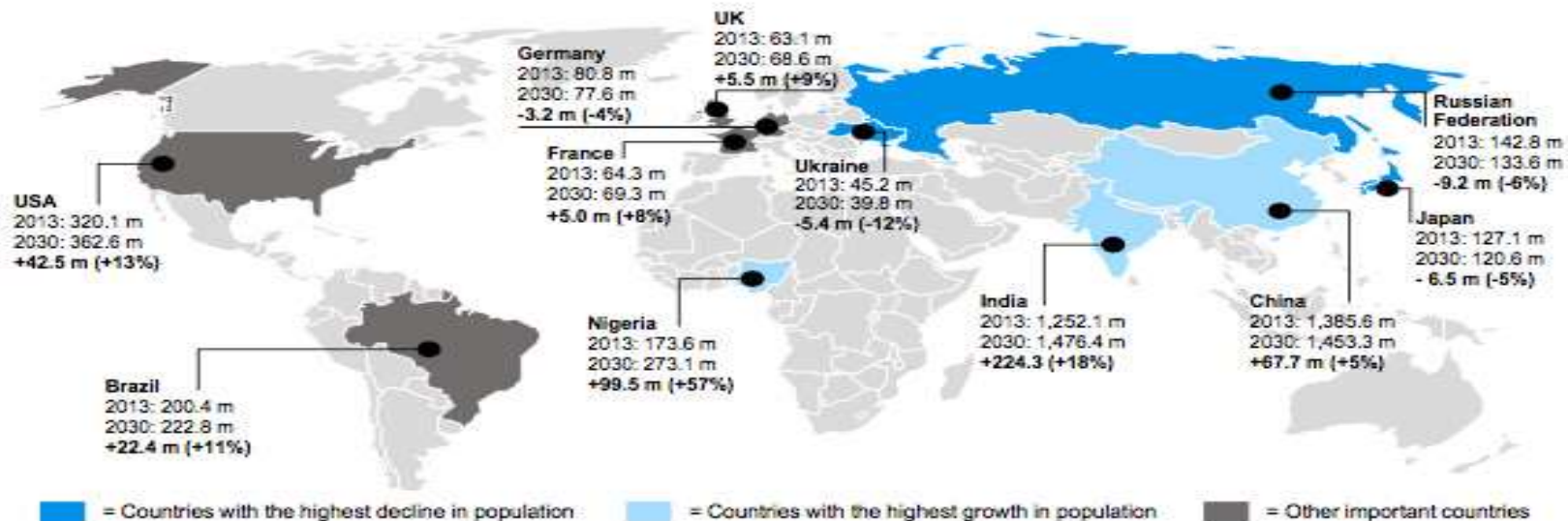


97% of population growth to be in developing world

Developing regions will see 97% of the world's population growth of 1.2 billion people between 2013 and 2030. In the same period the median age will increase to 33.2 years and Net migration too is expected to increase, with 44 million people on the move and cities will become ever more important as urban areas claim 60% of the world's population.

Demographic dynamics maps out global changes in human demographics between 2013 and 2030. The report maps the trajectory of the planet in normal circumstance, thus, without allowing for natural disasters, increased mortality from antibiotic resistance. To generate the results, the consulting firm screened all relevant trend, scenario and future studies worldwide, after which they verified and analysed the results, using them to define the megatrends.

Key countries in terms of population growth/decline between 2013 and 2030



ESTIMATED WORLD AND REGIONAL POPULATION AT VARIOUS DATAS (IN MILLION)

Region/year	10,000BC	1AD	1750	1850	1950	2000	2010	2020	2030	2050
Africa			106	111	221	796	1022	1271	1518	1998
Asia			502	809	1398	3680	4252	4546	4846	5095
Europe			163	279	547	728	732	722	707	664
Latin America			16	38	167	520	580	660	713	769
North America			02	26	172	316	351	379	405	445
Oceania			02	02	12.8	31.0	35.6	39	43	49
World	01	200	791	1262	2519	6070	6972	7617	8233	9021

WORLD POPULATION: 2020 Overview

- World population growth is slightly ahead of what was projected a few years ago.



- Africa leads, expected to add more than 1 billion people over the coming three decades, followed by Asia with about 650 million.
- Europe's population, in contrast, is projected to decrease by 37 million over this period.
- Two countries have reached the billion marks: China and India, each with current populations of 1.4 billion, reached that milestone in 1980 and 1997, respectively.
- India's current rate of demographic growth is double China's, 1.0 versus 0.5 percent.
- India's population could overtake China's by 2027.
- No other country is expected to reach a billion during the 21st century.
- Nigeria, projected to grow to 733 million by century's close, will move into third place by midcentury, overtaking the United States, anticipated to have 434 million people by 2100.

RANKING STATES BY POPULATION DATA

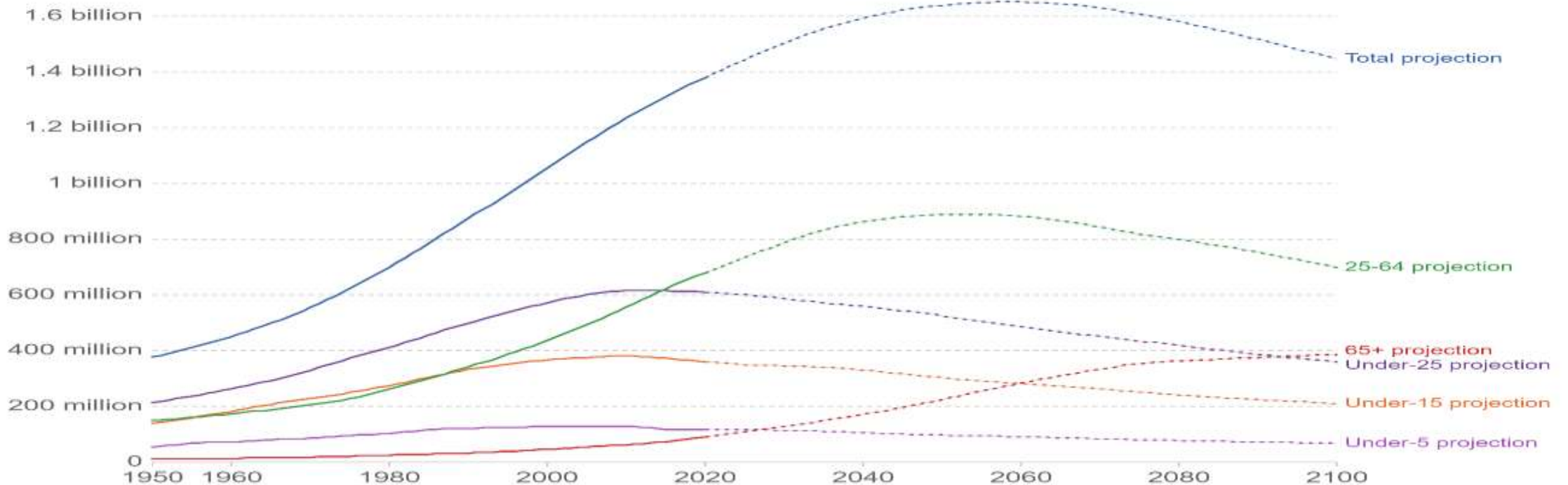
Rank	States	2011 Census	2021 (estimates)
1	Uttar Pradesh	19,98,12,341	24 Crores
2	Maharashtra	11,23,74,333	12.43 Crores
3	Bihar	10,40,99,452	12.70 Crores
4	West Bengal	9,12,76,115	10 Crores
5	Madhya Pradesh	7,26,26,809	8.70 Crores
6	Tamil Nadu	7,21,47,030	7.85 Crores
7	Rajasthan	6,85,48,437	8.25 Crores
8	Karnataka	6,10,95,297	6.83 Crores
9	Gujarat	6,04,39,692	6.43 Crores
10	Andhra Pradesh	4,95,76,777	5.44 Crores
11	Odisha	4,19,74,218	4.69 Crores
12	Telangana	3,50,04,000	3.98 Crores
13	Kerala	3,34,06,061	3.60 Crores
14	Jharkhand	3,29,88,134	3.92 Crores
15	Assam	3,12,05,576	3.60 Crores
16	Punjab	2,77,43,338	3 Crores
17	Chhattisgarh	2,55,45,198	2.98 Crores
18	Haryana	2,53,51,462	2.85 Crores
UT1	Delhi	1,67,87,941	1.90 Crores
UT2	Jammu & Kashmir	1,22,58,433	1.38 Crores
19	Uttarakhand	1,00,86,292	1.14 Crores
20	Himachal Pradesh	68,64,602	75 Lakhs
21	Tripura	36,73,917	42 Lakhs
22	Meghalaya	29,66,889	34 Lakhs
23	Manipur	28,55,794	32 Lakhs
24	Nagaland	19,78,502	23 Lakhs
25	Goa	14,58,545	16 Lakhs
26	Arunachal Pradesh	13,83,727	15.92 Lakhs
UT3	Puducherry	12,47,953	14.32 Lakhs
27	Mizoram	10,97,206	12.55 Lakhs
UT4	Chandigarh	10,55,450	11.69 Lakhs
28	Sikkim	6,10,577	7 Lakhs
UT5	Dadra & Nagar Haveli and Daman & Diu	5,86,956	6.20 Lakhs
UT6	Andaman & Nicobar	3,80,581	4.2 Lakhs
UT7	Ladakh	274,289	2.90 Lakhs

India's population growth will come to an end: the number of children has already peaked

- India's population is predicted to surpass that of China within the next decade, becoming the most populous country in the world.
- Population growth is estimated to reach 1.68 billion in 2050's.
- Population growth *will* come to an end: The number of children in India peaked more than a decade ago and is now falling.
- Landmark moments in demographic change – since 1950 and the UN's projections by age bracket.

Population by age bracket with UN projections, India

Historical population estimates (from 1950 to 2020), and projections through to 2100 based on UN medium fertility scenarios. This is shown for various age brackets and total population.



Source: United Nations – Population Division (2019 Revision)

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- i. The number of children under the age of five peaked in 2007; since then, the number has been falling
- ii. The number of Indians under 15 years age peaked slightly later and is now declining.

- India's population will still continue to grow as a result of 'population momentum'
- The trend witnesses an end to population growth: reaching 'peak child' anticipates the later 'peak population'.
- The number of children has peaked, the total population will follow and reach its peak in four decades.

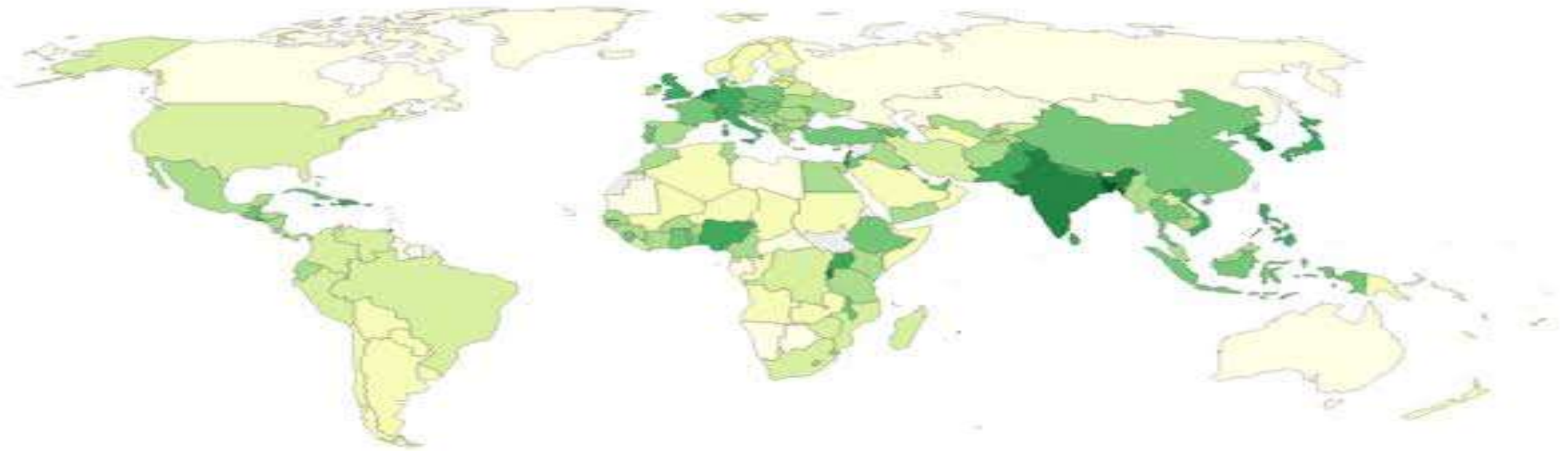
POPULATION DENSITY MAP

Population density world map

Population density, 2017

The number of people per km² of land area.

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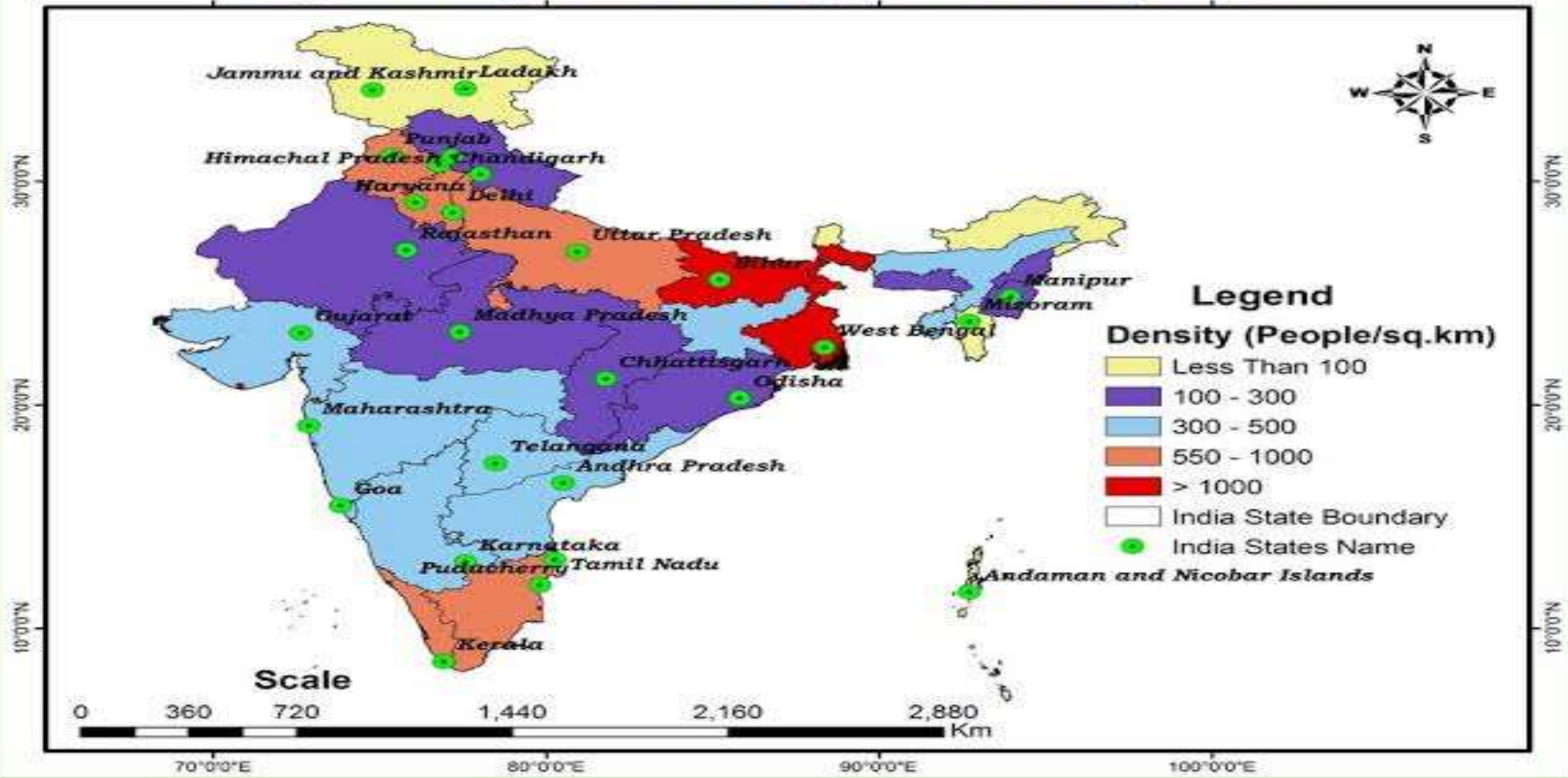


Source: World Bank

OurWorldInData.org/world-population-growth • CC BY

Population density India map

Map Showing State-wise Population Density in India



POPULATION DENSITY IN DIFFERENT STATES OF INDIA - 2011

STATE	POPULATION	AREA(in sq. Km)	DENSITY (People/sq. Km)
TAMILNADU	7,21,38,958	1,39,058	554
KERALA	33,406,061	38,863	859
MANIPUR	2,855,794	22,327	127
BIHAR	103,804,637	94,163	1102
UTTARPRADESH	199,581,520	2,40,928	828
MAHARASTRA	112,372,972	307713	365

POPULATION DENSITY IN DIFFERENT STATES OF INDIA - 2020

STATE	POPULATION	AREA(in sq. Km)	DENSITY (People/sq. km)
TAMILNADU	83,704,074	1,30,058	643
KERALA	34,678,294	38,863	892
MANIPUR	3,091,545	22327	138
BIHAR	128,458,570	94163	1364
UTTARPRADESH	231,521,022	240928	960
MAHARASHTRA	124,862,220	307713	405

TOP 10 MOST POPULOUS COUNTRIES IN THE WORLD (2020)

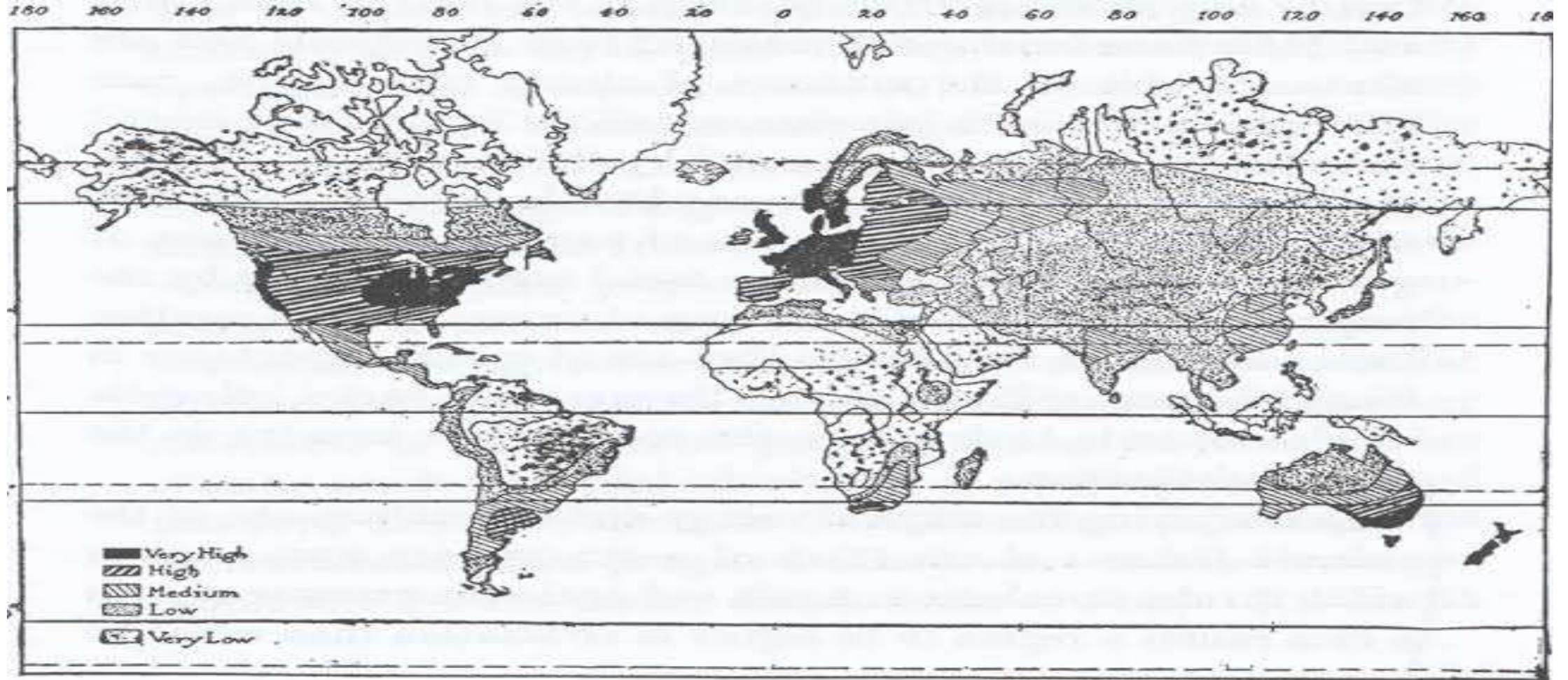
Country	Population
China	1.439 billion
India	1.380 billion
United states	331 m
Indonesia	274 m
Pakistan	221 m
Brazil	213 m
Nigeria	206 m
Bangladesh	165 m
Russia	146 m
Mexico	129 m

TOP 10 MOST POPULOUS COUNTRIES IN THE WORLD (2050)

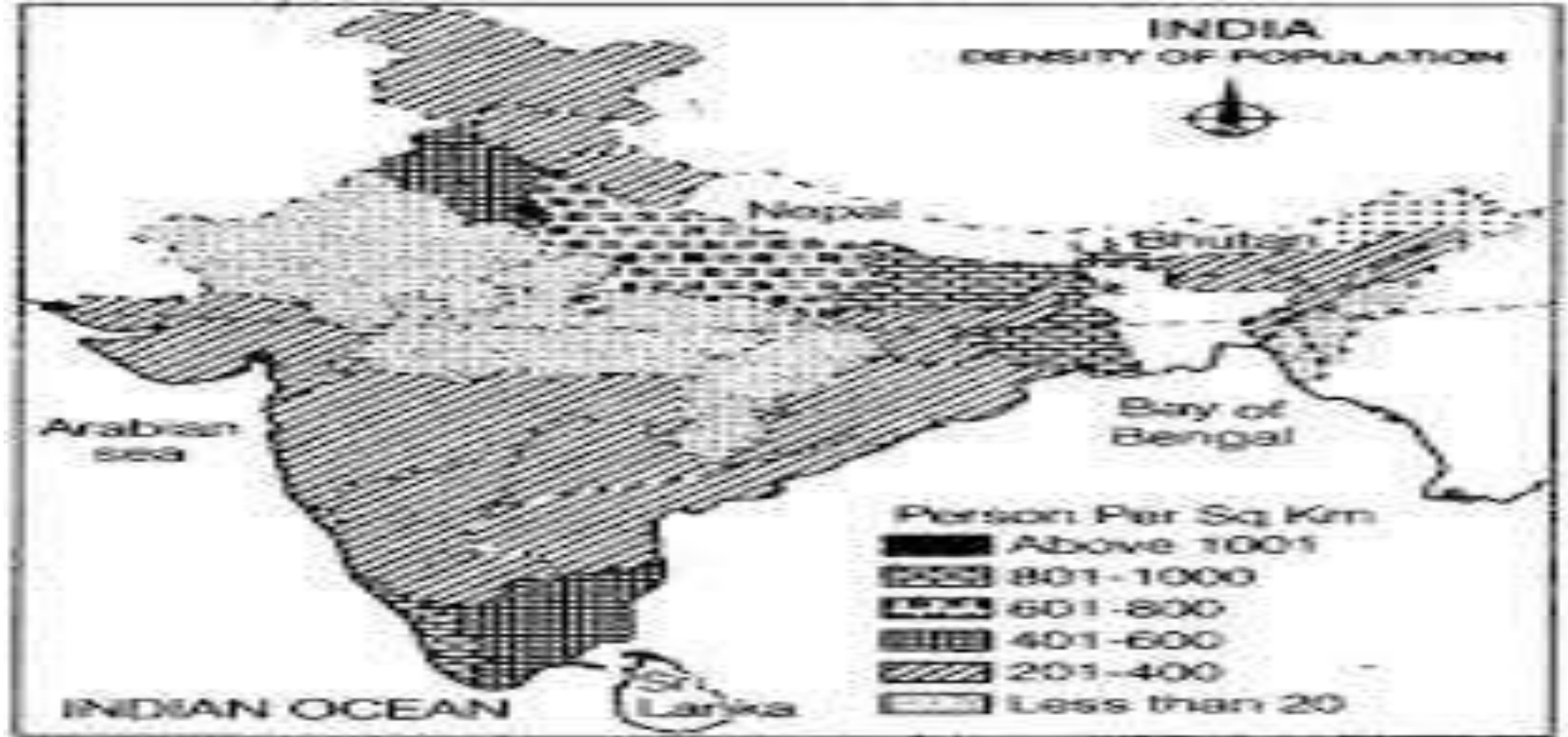
Country	Population
India	1.623 billion
China	1.329 billion
Nigeria	391 m
United states	388 m
Indonesia	318 m
Pakistan	290 m
Brazil	236 m
Bangladesh	193 m
Mexico	150 m
Russia	129 m

POPULATION DISTRIBUTION

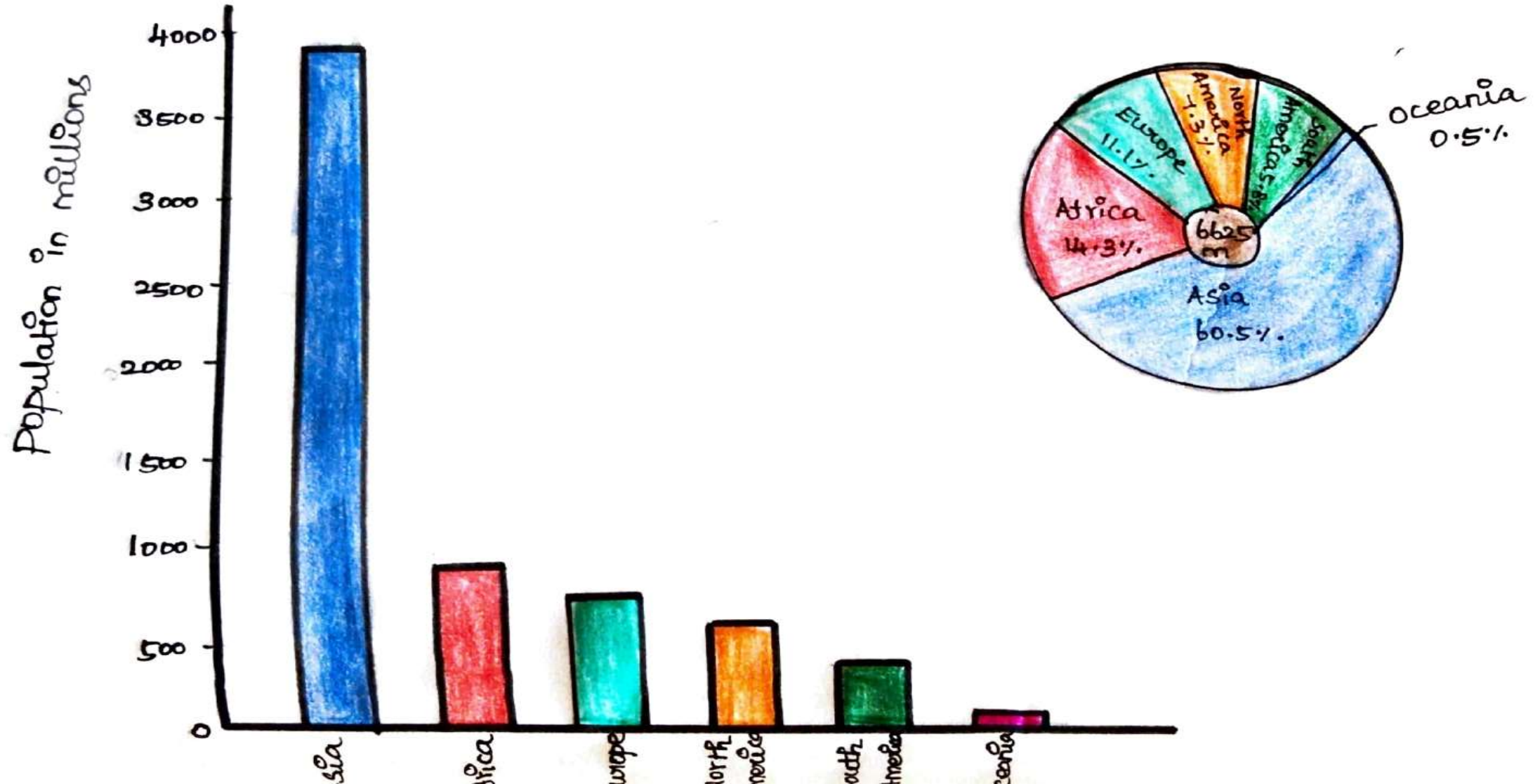
Pattern of Population Distribution Map for World



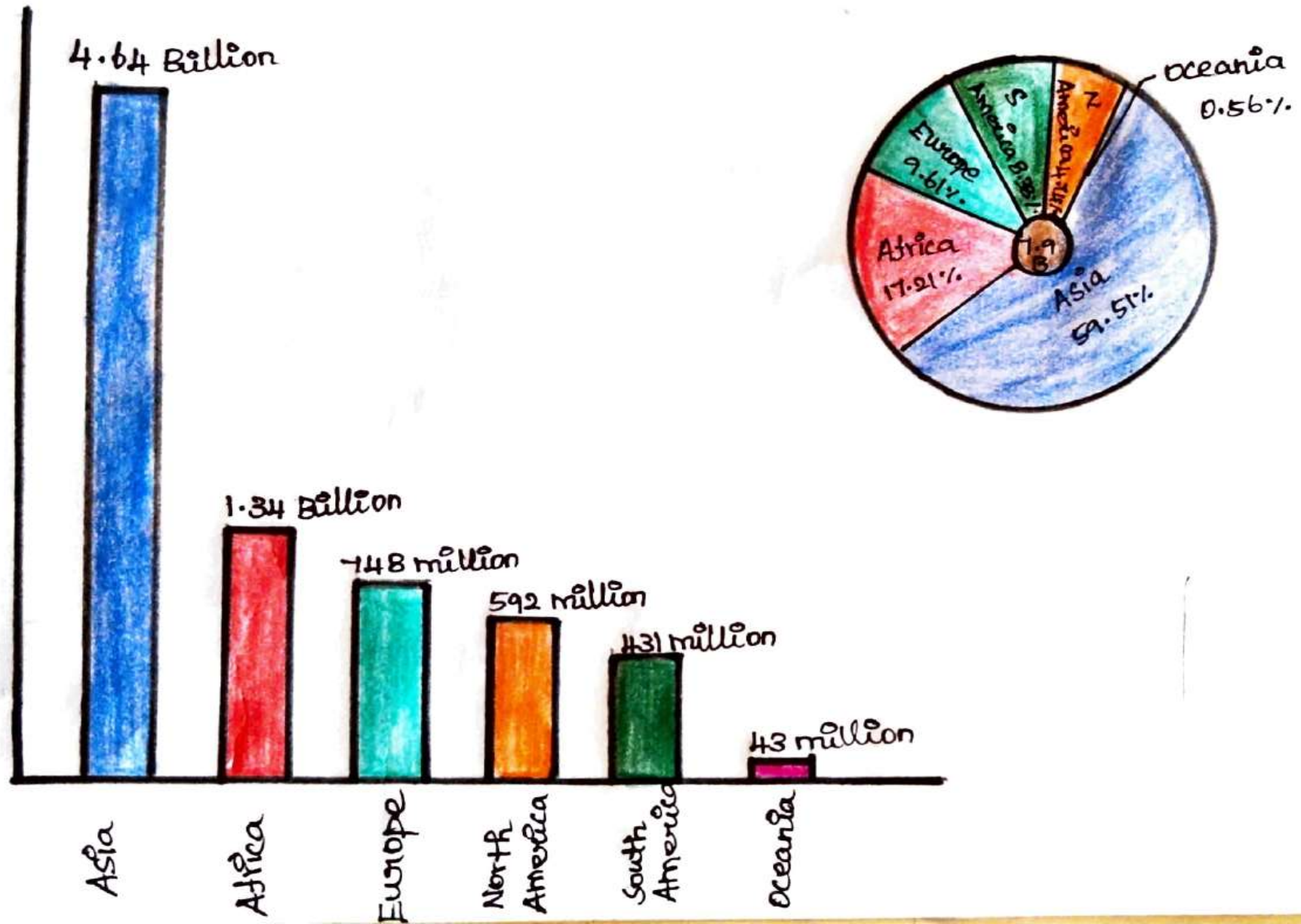
Pattern of Population Distribution Map for India



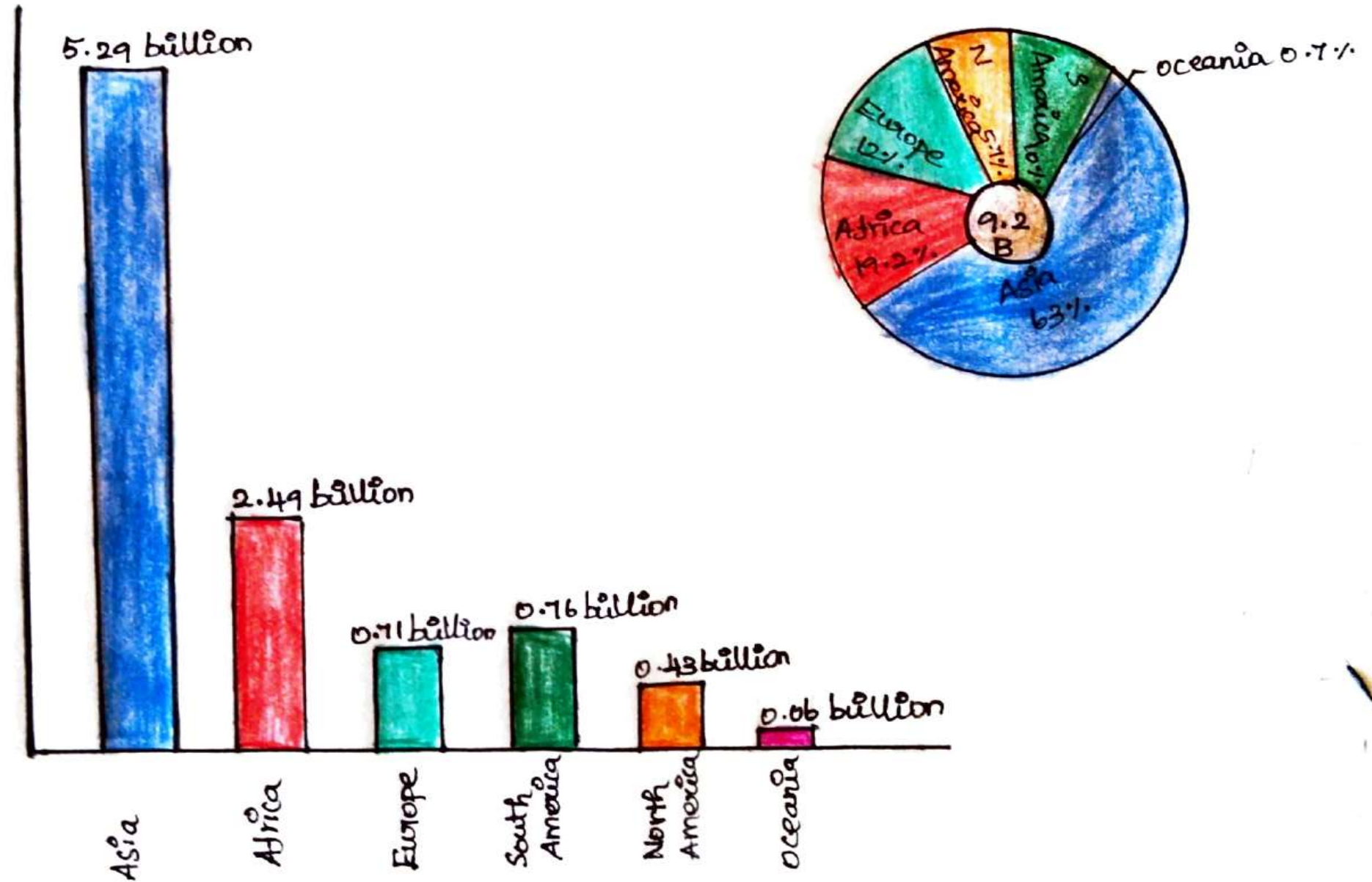
Distribution of the world Population among continents - (2007)



Distribution of the World Population → 2019-2020



Distribution of the world population - 2050



DETERMINANTS OF POPULATION CHANGE

Median age

The global median age is expected to increase from 29.2 years in 2013 to 33.2 years in 2030.

There is a difference of more than ten years between the median age in developing and developed regions. The median age in developed regions will increase from 40.5 year to 43.7 years and in developing regions from 27.2 years to 31.2 years. The biggest reason for the changes is the projected increase in life expectancy combined with lower fertility rates.

Global working age

The increase in the median age will affect the number of working age people. The projection shows that in developed countries the working age population will drop from 48% of the total population in 2013 to 44% in 2030. The biggest challenge in developed countries will be to cope with the increased share of population aged 60+, up from 23% in 2013 to 29% in 2030. While developed regions will need to consider how best to enjoy the golden years, developing regions will see a large absolute increase of young people looking to be educated and make their way in the world.

Migration and urbanization

The report finds that migration will increase over the coming years, with especially Europe and the US expected to see an influx of migrants. Currently, 3% of the world's population live as migrants in foreign countries, of which about 45% reside in either the EU or the US. Between 2013 and 2030 there will be worldwide net migration of 44 million people.

Migration within regions like from rural areas to cities is also expected to increase rapidly over the coming 20 years. By 2030, 60% of the world's population will be living in urban areas, compared to today's 53%. This means that 1.2 billion people will be leaving the fields to take part in city life. Eight out of ten people in developed countries and almost 56% of the population in developing countries will live in urban areas.

The consultancy notes that while the changes in world demographics will provide huge opportunities for business and people, large challenges too are expected to arise as billions of people come into existence and join urban ways of life.

World Population Indicators: 1950, 2020 and 2050

	1950	2020	2050
Total (billions)	2.5	7.8	9.7
Annual growth rate	1.8%	1%	0.5%
Annual increase (millions)	77	81	43
Sex ratio (males/100 females)	100	102	101
Percent in Urban Areas	30%	56%	68%
Number of megacities	1	33	48
Life expectancy at birth (years)	47	73	78
Infant mortality (deaths/1,000 births)	140	29	15
Total fertility rate (births per woman)	5	2.4	2.2
Percent under 15 years	34%	25%	21%
Percent 65 years and older	5%	9%	16%
Potential support ratio (15-64 per 65+)	12	7	4
Total immigrants (millions)	72*	275	400**
Total refugees (millions)	3*	26	40**

- The world population now stands at 7.8 billion inhabitants, having reached the 7 billion milestones in 2011.
- Demographers expect the 8 billion milestones in 2023, with global population projected to reach 9 billion by 2037 and 10 billion by 2056.
- This growth is slightly faster than projections from just a few years ago.

Annual growth rate

- In 1968 it was peaked at 2.1 percent annually
- Currently grows at 1 percent annually
- That annual growth rate is expected to continue declining, reaching 0.5 percent by midcentury.

Annual increase

- In 1988 it was peaked at 93 million annually.
 - The current annual increase of world population is 81 million.
 - Annual additions are projected to continue declining, reaching 48 million by 2050.
-
- The population growth is extraordinary, with most occurring in the world's poorer countries.
 - By midcentury about half of developing African countries are projected to see their populations more than double, including Angola, Burkina Faso, Democratic Republic of Congo, Mozambique, Niger, Nigeria, Tanzania and Uganda.

Sex ratio

- (1950-2020) had a ratio of around 100 to 102 males for every 100 females.
- Sex ratios at birth of most countries are around 105 males per 100 females, yet the ratios have reached as high as 120 in China and 114 in India in recent years.
- Recent data suggest these ratios appear to be on the decline.

Population percent in urban areas

- The proportion residing in urban areas has increased to 56 percent today and is expected to continue rising to nearly 70 percent by midcentury.

Number of megacities

- New York was the only megacity in 1950,
- The world has 33 megacities today
- A number expected to rise to 43 by 2050.

Life expectancy at birth (Year)

- A welcomed demographic change is increased longevity.
- Over the past seven decades (1950-2020), life expectancy at birth for the world increased by 28 years, from 45 to 73.
- The world population's life expectancy at birth is projected to reach 77 years in 2050 and nearly 82 in by 2100

Infant Mortality (Deaths / 1000)

- Impressive declines in infant mortality since 1950 have led to the world's infant mortality rate falling by 80 percent, from 140 to 29 deaths per 1,000 live births.
- In 2050 it would be 15 deaths per 1000 live births.

Total Fertility Rate (Births per women)

- Global fertility has decreased significantly from an average of about five births per woman in 1950 to 2.4 births per woman in 2020.
- Is expected to reach the replacement level of approximately two births by 2050.

Population Percent under 15 years

- It was 34% in 1950, but declined to 25% in 2020.
- Further going to decrease to 21% in 2050.

Population Percent 65 years and above

- It was 5% in 1950, increased to 9%.
- Further increase to 16% in 2050

Potential support ratio

- The world's potential support ratio – or PSR, the total working-age population, aged 15 to 64 years, to those aged 65 years or older – has declined from 12 in 1950 to seven today.
- The decline in such support is continuing, expected to sink to four by midcentury.

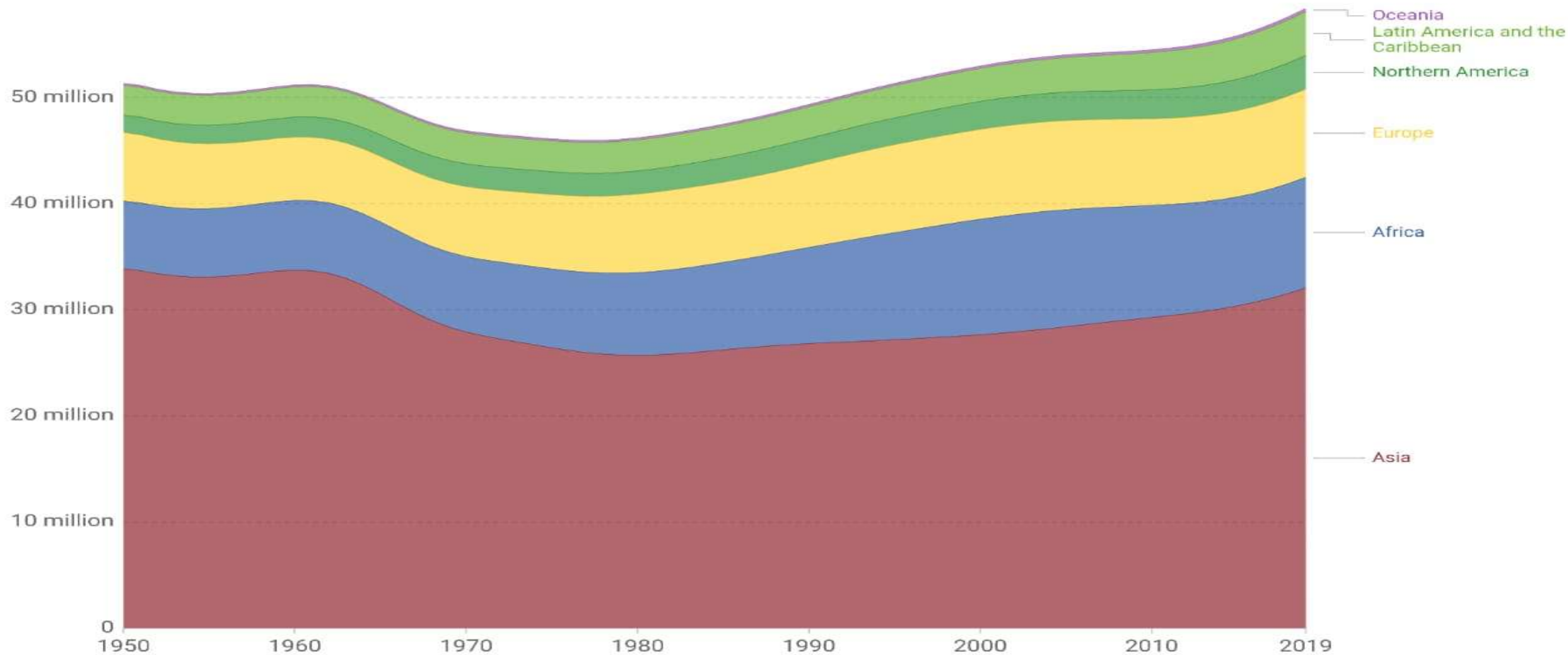
Total immigrants (In millions)

- International migration has increased in recent years, with about 275 million people.
- It was 72 million people in 1950 & by 2050 it will be 400 million people.

The chart shows the number of deaths by world region from 1950-2019

Annual number of deaths by world region

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Source: United Nations – Population Division (2019 Revision)

OurWorldInData.org/life-expectancy/ • CC BY

	1950	1960	1970	1980	1990	2000	2010	2019
Oceania	184,249 deaths	179,541 deaths	195,727 deaths	196,308 deaths	211,612 deaths	229,935 deaths	253,986deaths	285,413deaths
Latin America and the Caribbean	2.8 million deaths	2.85 million deaths	2.91 Million deaths	2.93 million deaths	2.98 million deaths	3.11 million deaths	3.15 million deaths	4.14 million deaths
North America	1.68 million deaths	1.89 million deaths	2.16 million deaths	2.21 million deaths	2.44 million deaths	2.64 million deaths	2.74 million deaths	3.2 million deaths
Europe	6.4 million deaths	5.96 million deaths	6.59 million deaths	7.45 million deaths	7.84 million deaths	8.46 million deaths	8.16 million deaths	8.29 million deaths
Africa	6.39 million deaths	6.58 million deaths	7.11 million deaths	7.88 million deaths	9.06 million deaths	10.89 million deaths	10.56 million deaths	10.43 million deaths
Asia	33.69 million deaths	33.72 million deaths	27.89 million deaths	25.74 million deaths	26.81 million deaths	27.64 million deaths	29.27 million deaths	32.05 million deaths
Total	51.14 million deaths	51.19 million deaths	46.85 million deaths	46.4 million deaths	49.35 million deaths	52.98 million deaths	54.5 million deaths	58.39 million deaths

AGE SPECIFIC DEATH RATE

Definition

Age specific death rate is the total number of deaths to residents of a specified age or age group in a specified geographic area(country, state). Divided by the population of the same age or age group in the same geographic area(for a specific time period, usually a calendar year) and multiplied by 1000.

Formula

$$ASDR = \frac{D}{P} \times 1000$$

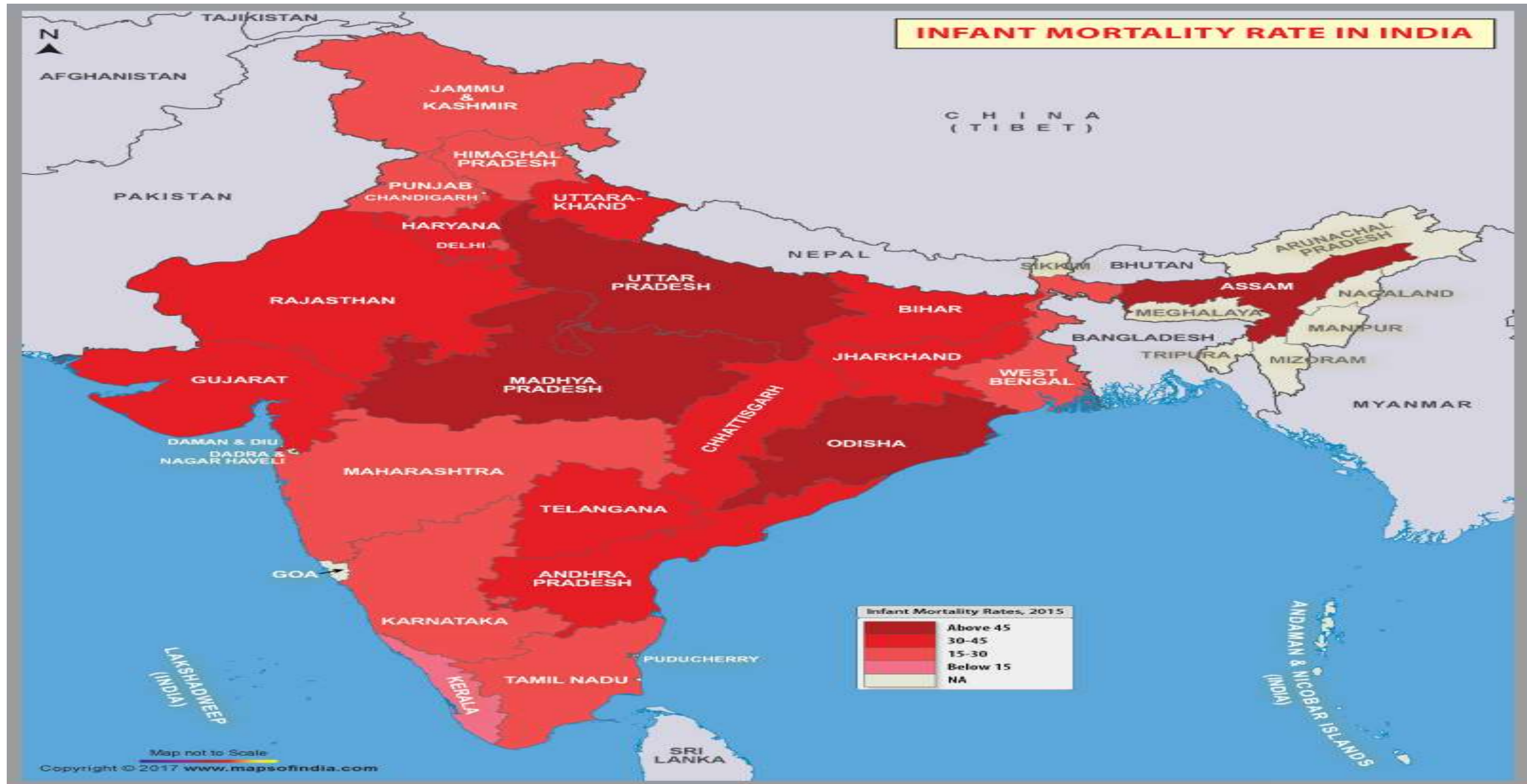
D- Number of death in the specific age group in year

P- average population in the age group in a year

Facts

- Approximately 150,000 people's die each day around the world.
- Approximately 2.84 million people in the United States lost their lives in 2018. The most common causes of death in the U.S. are heart disease and cancer, accounting for a combined 44 percent of all deaths.
- The average lifetime risk of maternal death in the rich world is 1 in 8,000, compared with 1 in 850 in developing countries and 1 in 450 in least developed countries.
- One of the largest declines in the number of deaths is from diarrheal diseases, with global deaths falling from 2.6 million in 2000 to 1.5 million in 2019.

Map and Table for Age Specific Death Rate, India



CHILD MORTALITY RATE IN INDIA

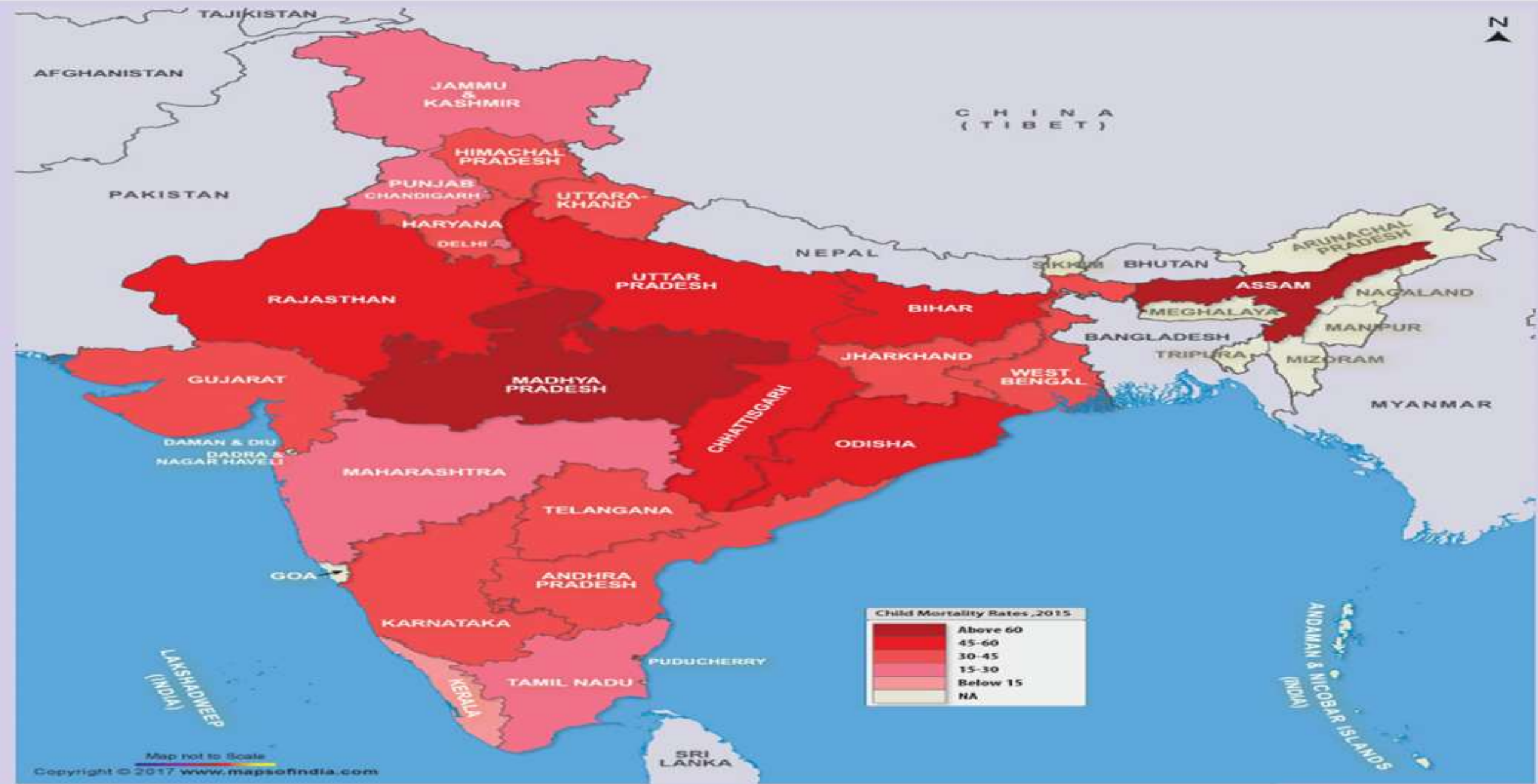


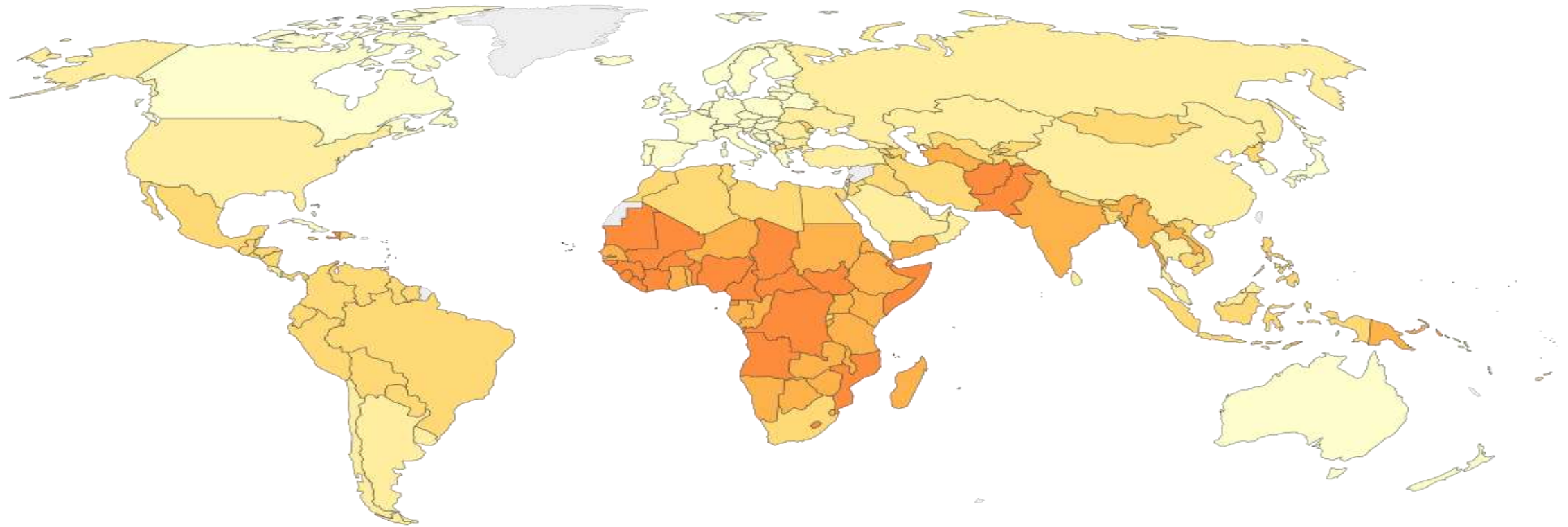
Table- I: India Age Specific Death Rates, Male & Female,2010-2025

Age Group	Age specific death rates(male)				Age specific death rates(female)			
	2010	2015	2020	2025	2010	2015	2020	2025
0-4	13.82	11.53	9.61	8.02	14.28	11.82	9.78	8.09
5-9	1.19	0.98	0.81	0.67	1.23	0.98	0.78	0.62
10-14	0.90	0.80	0.72	0.64	0.91	0.80	0.70	0.62
15-19	1.34	1.25	1.17	1.09	1.52	1.36	1.21	1.08
20-24	1.89	1.79	1.70	1.61	1.93	1.70	1.51	1.33
25-29	2.48	2.44	2.41	2.38	1.91	1.70	1.51	1.35
30-34	3.06	3.01	2.97	2.93	1.96	1.74	1.55	1.39
35-39	3.94	3.87	3.80	3.73	2.25	2.02	1.82	1.63
40-44	5.11	4.92	4.73	4.56	2.76	2.46	2.20	1.96
45-49	7.08	6.69	6.32	5.97	4.03	3.66	3.32	3.02
50-54	10.45	9.76	9.11	8.51	5.92	5.27	4.68	4.17
55-59	18.12	17.79	17.47	17.15	10.33	9.51	8.75	8.05
60-64	24.08	22.42	20.88	19.45	16.21	14.61	13.16	11.86
65-69	38.00	35.98	34.07	32.27	26.70	24.64	22.74	20.99
70-74/70+	67.84	62.68	57.91	53.50	60.24	55.61	51.34	47.40

Age Specific Death Rate of the World

Infant mortality, 2017

Infant mortality is defined as the share of children dying before their 1st birthday.



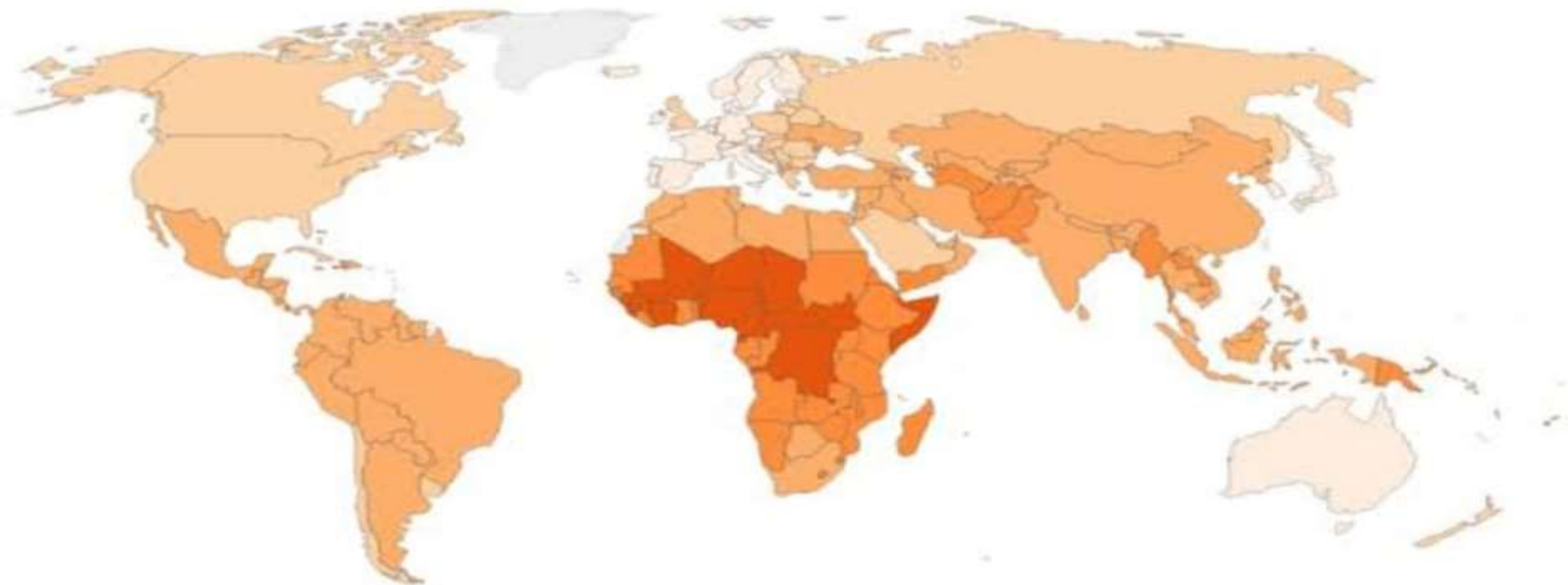
Source: UN Inter-agency Group for Child Mortality Estimation (IGME)

Youth mortality rate, 2017

Youth mortality is the share of newborns who die before reaching the age of 15.



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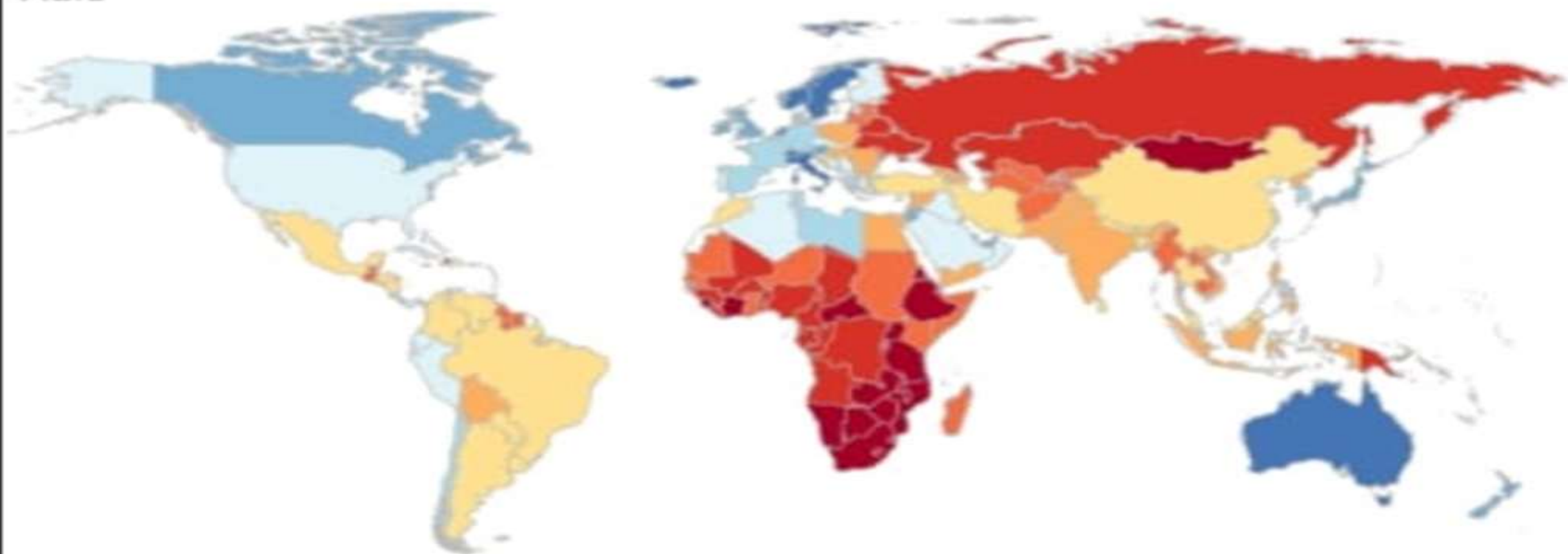







Source: United Nations Inter-agency Group for Child Mortality Estimation (2018)

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Worldwide adult mortality in 2010

Male



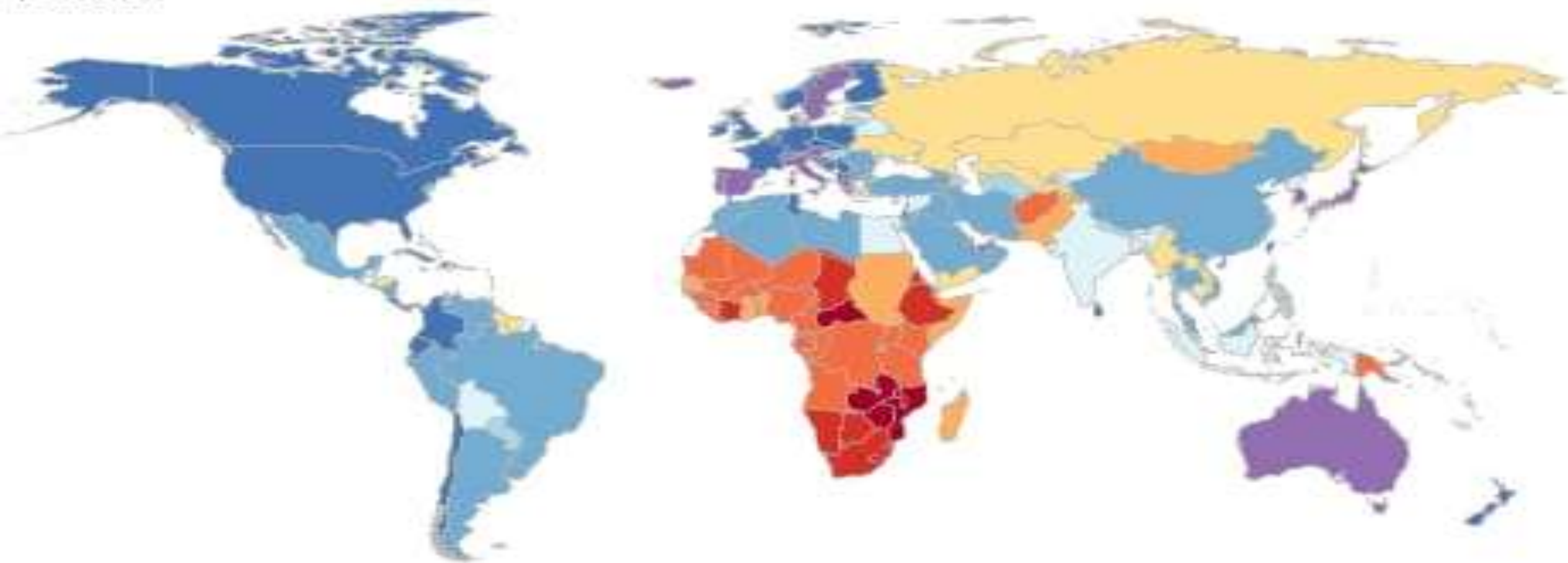
 < 51 deaths per 1,000
 51-80 deaths per 1,000
 81-100 deaths per 1,000
 101-120 deaths per 1,000
 121-150 deaths per 1,000

 151-200 deaths per 1,000
 201-250 deaths per 1,000
 251-350 deaths per 1,000
 351-450 deaths per 1,000
 > 450 deaths per 1,000

Source: The Lancet

Worldwide adult mortality in 2010

Female



■ < 51 deaths per 1,000
■ 51-80 deaths per 1,000
■ 81-100 deaths per 1,000
■ 101-120 deaths per 1,000
■ 121-150 deaths per 1,000

■ 151-200 deaths per 1,000
■ 201-250 deaths per 1,000
■ 251-350 deaths per 1,000
■ 351-450 deaths per 1,000
■ > 450 deaths per 1,000

Source: The Lancet

Causes:

1. Children (00-14 years)
 - Preterm birth complications
 - Acute respiratory infections
 - Diarrhea
2. Youth (15-24 years)
 - Self harm
 - Suicide attempts
 - Self Influcted wounds
3. Adults and seniors (25-64years and 65 years over)
 - Casualty
 - Depression
 - Heart disease
 - Cancer
 - Stroke
 - Diabetes
 - Alzheimer's disease

Consequences:

- It Considers age composition of the population
- It is used in the computation of standardized death rates, net reproduction rates and life tables
- Controls of population growth
- Affects the economy

Solutions:

- Child mortality is a big deal, and a lot of people are fighting to reduce it in the developing world. In fact, the number of children younger than 5 who die each year from preventable causes has decreased dramatically — from 12.7 million in 1990 to 5.9 million in 2015. But that's not fast enough, per the World Health Organization and other development agencies.
- They insist governments can and should do more to further reduce the under-5 mortality rate — a key measure of a nation's care for its most vulnerable citizens, young children, and infants.

Solutions that save lives, reduce child mortality:

According to the World Health Organization, six solutions to the most preventable causes of under-5 deaths include:

- Immediate and exclusive breastfeeding
- Skilled attendants for antenatal, birth, and postnatal care
- Access to nutrition and micronutrients
- Family knowledge of danger signs in a child's health
- Improved access to water, sanitation, and hygiene
- Immunizations