Human population and Environment

Urban environmental problems

Half of the global population already lives in cities, and by 2050 two-thirds of the world's people are expected to live in urban areas.

Urban populations interact to a greater extent with their environments, compared to rural populations. Urban population occupies 3% of land area, but consumes 75% of its resources and produce 70% of the waste.

Urban resources such as job opportunities, transport, education, medical and social services causes the mass migration of populations towards cities. This, results in a excessive consumption of resources.

Apart from developed nations, this generally results in negatively impacting the environment.

Urban environmental problems

Air pollution

The large number of motor vehicles and industrial pollution in a combined geographical space makes air quality in urban areas extremely poor.

According to the World Health Organisation, the concentration of suspended particles should be less than 90 micrograms per cubic meter. However, most of the metropolitan in India fails to meet this criteria.

Majority of the population living in Indian cities are at a high risk towards the dust and soot.

Urban environmental problems

Water crisis and pollution

Urbanisation is described as one of the most destructive forces affecting water bodies. before urbanization (before 1985) there were 2208 water bodies in Hyderabad and after urbanization (after 2005) there are only 432 water bodies.

Urbanization, in general, has four immediate repercussions on the hydrological cycle: flooding (e.g. as a result of increased soil sealing), water shortage (e.g. due to rising consumption), changes in the river and groundwater regimes as well as water pollution.

Urban environmental problems

Loss of biodiversity

There is a strong correlational link between increasing urbanisation and declining biodiversity. Urbanization impacts biodiversity and ecosystem services both directly and indirectly. Direct impacts primarily consist of habitat loss and degradation, altered disturbance regimes, modified soils and other physical transformations caused by the expansion of urban areas.

In the United Kingdom there is an increasing human population density, and it was found that within the surrounding urbanised areas, 35% of scarce plant species had become extinct as a direct result in the increase of urban development.

Urban environmental problems

Shortage of accommodation and substandard houses made of any materials

Unobtainable to basic facilities such as clean water, electricity and sewage system

Unobtainable to urban resources such as job opportunities, transport, education, medical and social services

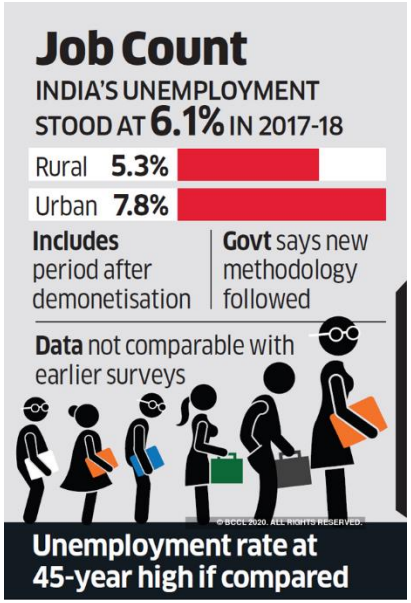
Urban environmental problems

Poor living environment, Outbreak of diseases

Unemployment and underemployment

Family conflicts, mental distresses

High crime rate, Social unrest



Consumerism and waste products

Consumerism is constant purchasing of new goods, without emphasizing the necessity.

It is one of the major hindrance to the sustainable development, as resources are being consumed rapidly.

Enhancement of technology also adds to this problem.

It also creates unwanted waste. Landfills in the developed countries is one such example.

Population and consumerism

The consumption of resources is positively correlated with waste generation and the degradation of the environment.

With the dawn of industrial era, consumerism has shown an exponential rise in the last few decades.

In less developed contrives (LDCs), although per capita consumption is low, overall consumption of resources is high due to large population.

Less population size and due to a combination of better life styles overall high standards of living and high levels of infrastructure, per capita consumption of resources is very high.

Overall envrionmental impact

Impact = Number of people x per capita use of resources x waste generated per unit of resource used

Impact=Population x Affluence x Technology

$$I = P \times A \times T$$

Although the population of India is 3.4 times more than that of USA, its overall energy use and waste generation are less than l/8th that of USA.

Thus more consumerism has higher influences waste production.

Nation	Population (millions of people)	Affluence (per capita income, in GNI PPP)[1]	Personal impact (per capita footprint, in ha/person)	Total impact (national footprint, in millions of ha)
Belgium	10.8	$34,760	8.0	86
Brazil	193.3	$10,070	2.9	
China	1,338.1	$6,020	2.2	
Ethiopia	85.0	$870	1.1	
India	1,188.8	$2,960	0.9	
Japan	127.4	$35,220	4.7	
Mexico	110.6	$14,270	3.0	
Russia	141.9	$15,630	4.4	
United States	309.6	$46,970	8.0	2,477

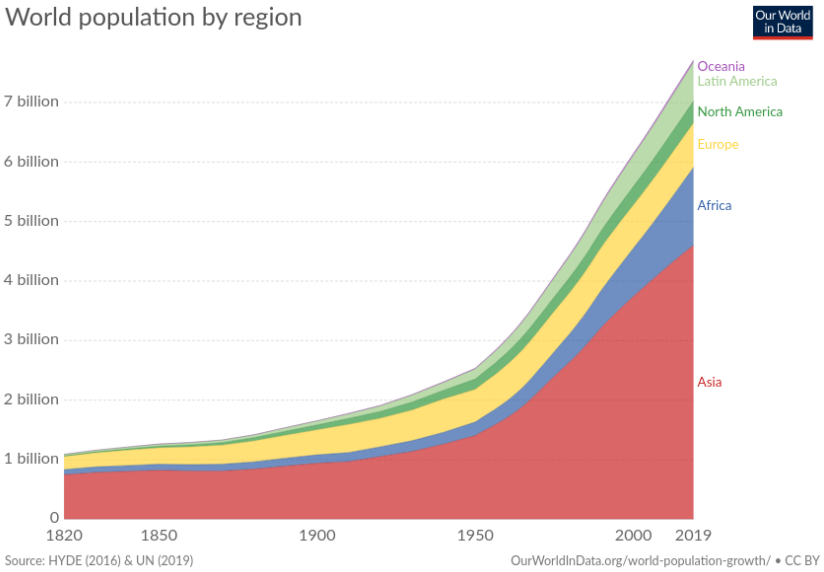
[1]GNI PPP is "gross national income in purchasing power parity," a measure that standardizes income among nations by converting it to "international" dollars, which indicate the amount of goods and services one could buy in the United States with a given amount of money.

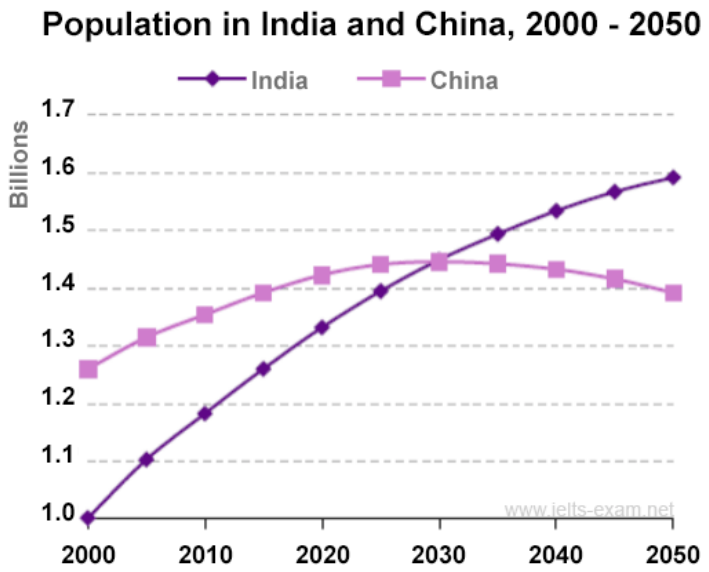
Data Sources: *Population and affluence data are from Population Reference Bureau, 2010. World population data sheet 2010. Footprint data are for 2007, from WWF International, Zoological Society of London, and Global Footprint Network. Living Planet Report 2010.*

Population

India and China account for more than one third of the world population.

One child policy of China has controlled the growth of Chinese populations. However, Indian population is still growing a rapid pace.





Population

FACTORS INFLUENCE THE SIZE OF THE HUMAN POPULATION ?

Population size increases through births and immigration,

Population size decreases through deaths and emigration.

Total fertility rate: Size of a human population is the average number of children born to the women in that population.

TFR is 1.9 in developed nations and 4.7 developing nations. TFR for India is 2.22.

The numbers of males and females in young, middle, and older age groups determine how fast a population grows or declines.

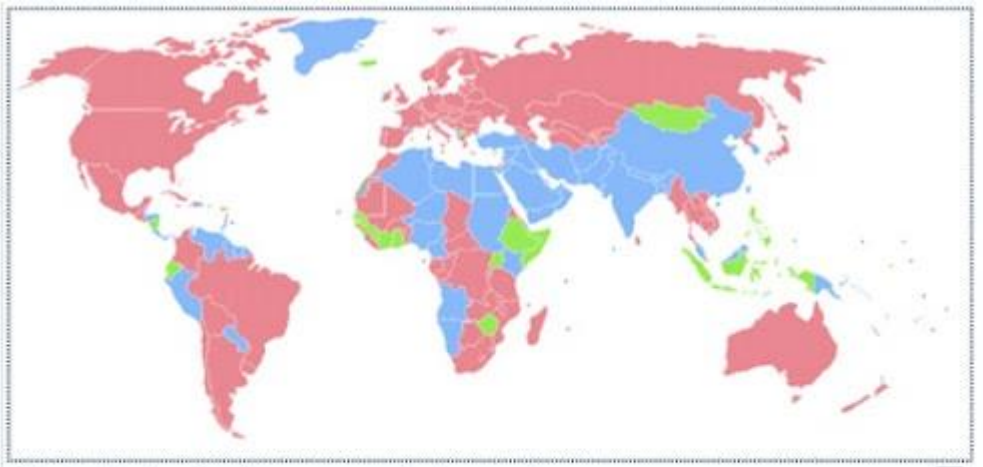
Population change = (Birth + Immigration) - (Death + Emigration)

Population structure: gender ratio

Asian and African countries, generally has a higher male population.

European and American countries has a higher female population.

In India, Kerala and Puducherry, has female population. All other states has lower female population.

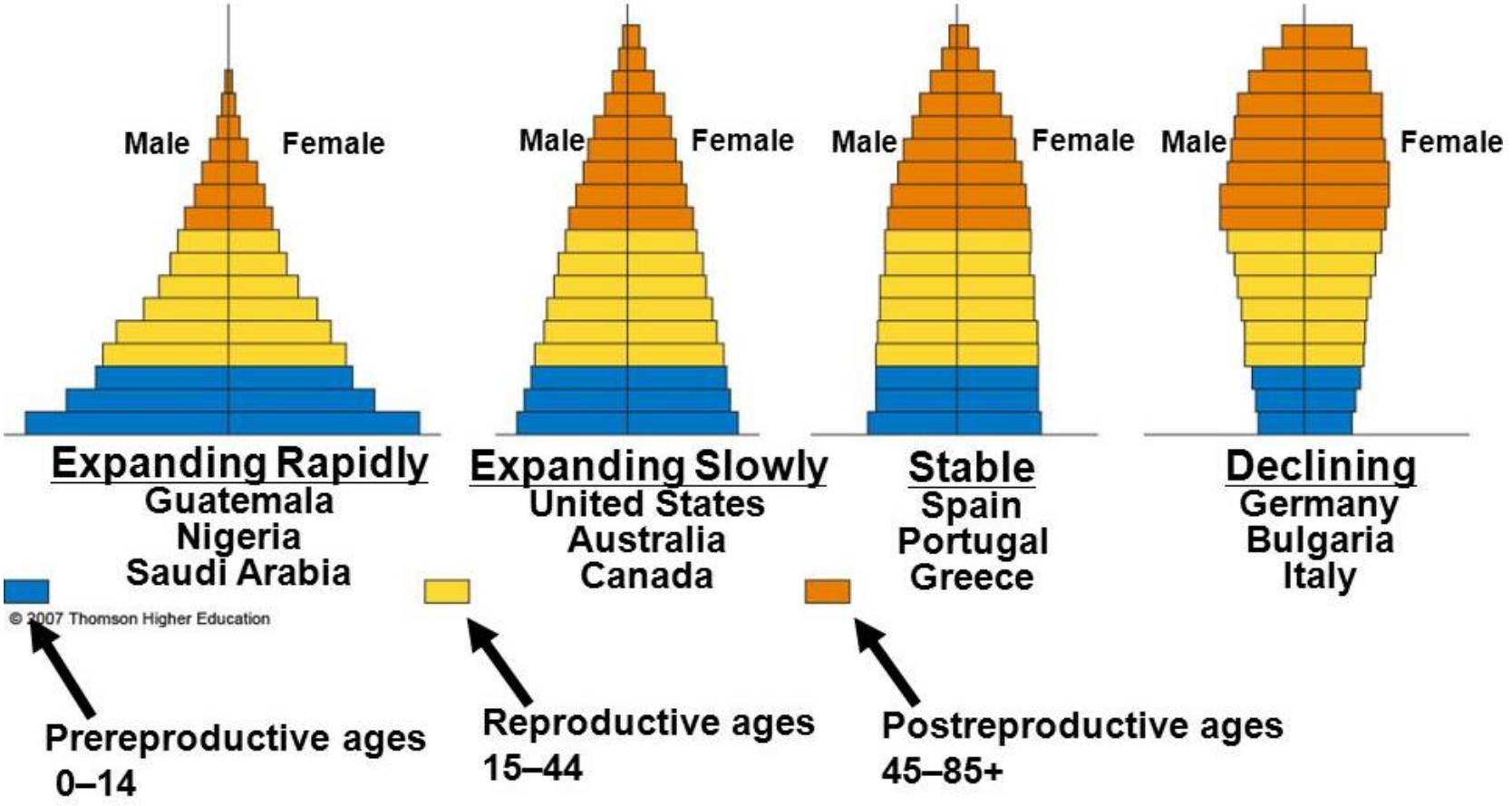


Map indicating the human sex ratio by country.

- Countries with more **females** than males.
- Countries with the **same** number of males and females.[*clarification needed*]
- Countries with more **males** than females.
- No data

Population structure issues (gender inequality)

Population structure vs age



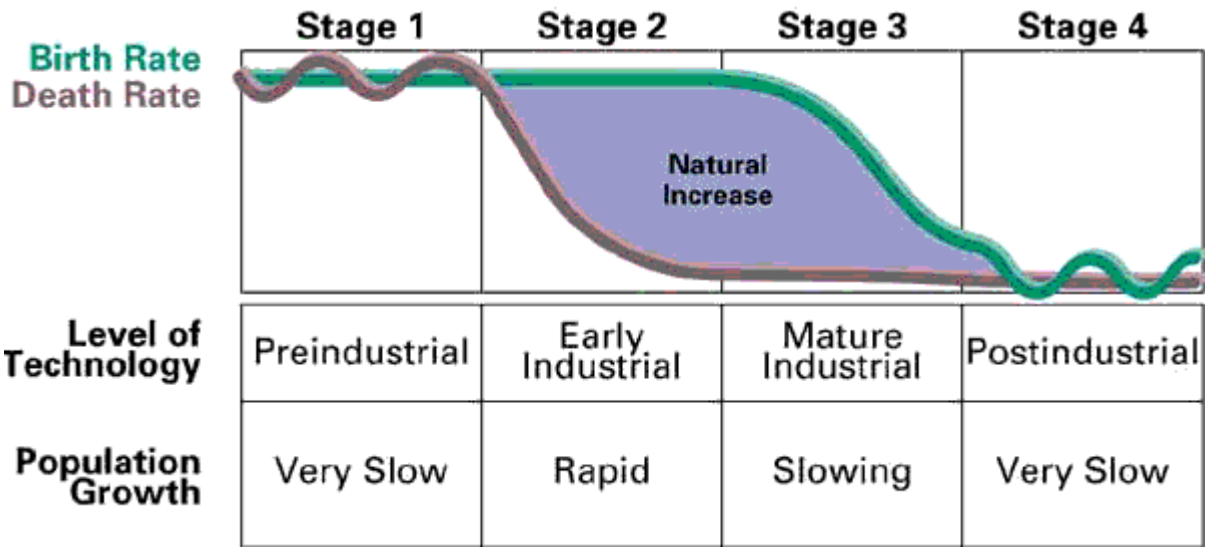
Population structure and economic development

Both population structure and economic development impact each other significantly.

Generally with economic growth, rate of growth of population decreases.

An aging population tends to lower labour-force participation and savings rates, and may slow economic growth.

Younger population ensures the availability of the work force.



Women and child welfare and economic development

Social and economic development are interlinked.

Economic development is just policy with aims at improving the social well-being as well as economic conditions of the nation.

Modern criteria's for economic developments are

- Rise in real per capita income
- Quality of life and expectancy
- Real gross national product
- Human development index
- Gender-related development index
- Poverty index

Women and child welfare and economic development

Child welfare is a term most often used in a general sense to encompass the broad scope of involvement by the state and its authorized professionals in assisting children and their families – both in cases of abuse and neglect and when families and children are found to be in need.

Child welfare is concerned with protecting children through general prevention services including health, education, recreation, family support, and treatment services.

Since children are the future of the country hence, their education is of primary importance for any every nation. Constitution of India provides free and compulsory education of all children in the age group of six to fourteen years as a Fundamental Right.

Women and child welfare and economic development

Women welfare is a social welfare program which seeks to promote the welfare of women by giving special attention to the prevention, eradication in any form, as well as the promotion of skills of employment and self – actualization.

There is a bidirectional relationship between economic development and women's empowerment defined as improving the ability of women to access the constituents of development—in particular health, education, earning opportunities, rights, and political participation.

In one direction, development alone can play a major role in driving down inequality between men and women; in the other direction, continuing discrimination against women can, hinder development. Empowerment can, in other words, accelerate development.

Women empowerment and economic development

women account for 70% of the world's poor because of unequal economic opportunities

Women’s empowerment boosts productivity, increases economic diversification and income equality in addition to other positive development outcomes.

Increasing women’s and girls’ educational attainment contributes to women’s economic empowerment and more inclusive economic growth.

Companies greatly benefit from increasing employment and leadership opportunities for women, which is shown to increase organizational effectiveness and growth. It is estimated that companies with three or more women in senior management functions score higher in all dimensions of organizational performance.

Women empowerment and economic development

Empowerment of women is a necessity for the very development of a society, since it enhances both the quality and the quantity of human resources available for development.

Women's empowerment is all about allowing and equipping women to make life-determining choices across different issues in the country.

Social transformation as a component of sustainable development is unthinkable without the involvement of women.

Empowering and educating women is vital in reducing population growth, maintaining healthy family/society and avoiding the badly socialized, stereotyped perception of society towards women.

Sustaining human societies

Consequences of dramatic climate change and the approaching limits of the planets resources, the great majority of world population recognize the need for change.

A change from a consumer society to a sustainable, conserver society must focus on the welfare of the planet and future generations through balance rather than maximizing exploitation.

Consumption, both in terms of per capita and total population must be balanced.

In order for a society to remain sustainable, it must be:

Energetically Sustainable
Resource sustainable
Environmentally sustainable
Fiscally sustainable
Socially sustainable

Economics and environment

Economical development is necessary to improve human life quality. Rapid economic growth combined with a rapid population growth has placed great stress on the environment.

One of the great challenges of modern economics is to protect the environment.

It is possible to have economic growth (increased output and living standards) whilst at the same time improving the environment we live in. But, this requires a much more conscious decision to place the environment as a primary economic objective.

The biggest problem is making sure that we actually include all environmental costs in the price of goods and services we use. The first essential aspect is for society and governments to recognise all the external costs and external benefits of the environment.

Economics and environment

We need to put a monetary value on the cost of pollution / environmental damage and make sure that is reflected in the price people pay.

One of the major shortcoming of this is, it may require governments to actually ban a few process. It requires a strong degree of international co-operation. Implementing these may be easy for developed nations. On the other hand underdeveloped and developing countries will not comply.

So, we also need other methods, other than purely economic, to overcome environmental challenges we are facing.

Two most effective methods are

- Regulation and policies
- Education

Policies and environment

To achieve economic development, it is important to harmonize the economic development and environmental interest.

In order to earn foreign exchange, heavy reliance is being placed on exports. This is most evident in the sectors of fisheries, shrimp aquaculture, floriculture and cash cropping.

Tourism is being promoted on a large-scale in the wake of liberalization, ignoring its adverse effects on local population and the serious damage it causes to the ecology.

Sanction of development projects in ecologically fragile and biodiversity-rich areas and wanton deforestation are resulting in depletion of our rich biodiversity.

New and better environment policies are thus required to achieve sustainable development.

Policies and environment

The National Conservation Strategy and Policy Statement on Environment and Development, 1992 was one of the first attempts of the Government of India to develop a policy framework for environmental protection. The National Forest Policy, 1988 and the Policy Statement for Abatement of Pollution, 1992 are some other policy frameworks that advocate effective environmental management at the national level.

Objectives of the National Environment Policy, 2006

1. Conservation of Critical Environmental Resources – To protect and conserve critical ecological systems and resources, and invaluable natural and man-made heritage, which are essential for life-support, livelihoods, economic growth, and a broad conception of human well-being.

Policies and environment

2. Intergenerational Equity – To ensure judicious use of environmental resources to meet the needs and aspirations of the present and future generations.

3. Integration of Environmental Concerns in Economic and Social Development – To integrate environmental concerns into policies, plans, programmes and projects for economic and social development.

4. Efficiency in Environmental Resource Use – To ensure efficient use of environmental resources in the sense of the reduction in their use per unit of economic output, to minimize adverse environmental impacts.

5. Environmental Governance – To apply the principles of good governance (transparency, rationality, accountability, reduction in time and costs, participation, and regulatory independence) to the management and regulation of the use of environmental resources.

Policies and environment

6. Enhancement of Resources for Environmental Conservation – To ensure higher resource flows, comprising finance, technology, management skills, traditional knowledge and social capital for environmental conservation through mutually beneficial multi-stakeholder partnerships between local communities, public agencies, the academic and research community, investors, and multilateral and bilateral development partners.

Although India has many laws and policies to protect environment, their effectiveness is still under debate.

Education and environment

Improving knowledge, instilling values, fostering beliefs and shifting attitudes, education has considerable power to help individuals reconsider environmentally harmful lifestyles and behaviour.

By increasing awareness and concern, education can encourage people to reduce their impact on the environment.

Education encourages people to use energy and water more efficiently and recycle household waste.

People with more education tend not only to be more concerned about the environment, but also to engage in actions that promote and support political decisions that protect the environment.

Education and environment

An analysis of the Global Warming Citizen Survey in the United States also showed that the higher a respondent's education level, the greater his/her activism in terms of policy support, environmental political participation and environment-friendly behaviour.

We all know that it's difficult to change attitudes and practices overnight. Completing education courses, both formal and non-formal, takes time to complete.

The completion of higher levels of education does not automatically translate into more responsible behaviour towards the environment.

Education and environment

Environmental education is a process that allows individuals to explore environmental issues, engage in problem solving, and take action to improve the environment. As a result, individuals develop a deeper understanding of environmental issues and have the skills to make informed and responsible decisions.

The components of environmental education are:

- Awareness and sensitivity to the environment and environmental challenges
- Knowledge and understanding of the environment and environmental challenges
- Attitudes of concern for the environment and motivation to improve or maintain environmental quality
- Skills to identify and help resolve environmental challenges
- Participation in activities that lead to the resolution of environmental challenges