1. Details of Module and its structure

Module Detail	
Subject Name	Sociology
Course Name	Sociology 03 (Class XII, Semester - 1)
Module Name/Title	Demographic Structure – Part 1
Module Id	lesy_10201
Pre-requisites	Concept of Demography
Objectives	After going through this lesson, the learners will be able to understand the following: • The concept of demography • How demography has emerged • Composition and Distribution of population & the Factors determining it • The types of Demography • The importance of demography.
Keywords	Sociology, Society, Demography, Formal demography, Social demography, Birth rate, Death rate, Immigration, Emigration

2. Development Team

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Demography

What is 'Demography"? Let us first understand the concept and origin of the word Demography.

The term is of Greek origin and is composed of two words, 'demos' meaning 'people' and 'graphein' meaning 'describe', implying the description of people.

The Merriam-Webster defines demography as the "statistical study of human populations especially regarding its size, density and distribution of people. When we talk of **size** we refer to the number of persons in the population, **distribution** refers to the arrangement of the population in space at a given time and **structure** indicates the composition in terms of sex and age groupings.

If you look at the country, India, for example, the distribution of population across the country varies. In terms of density, for example, population varies from state to state. Hence, Uttar Pradesh becomes the most populated state while Arunachal Pradesh, least populated in terms of density. Sikkim has the smallest population with 607,688 people among all states of India.

Furthermore, Demography, also studies the trends and processes associated with population including – changes in population size; patterns of births, deaths, and migration; and the structure and composition of the population, such as the relative proportions of women, men and different age groups.
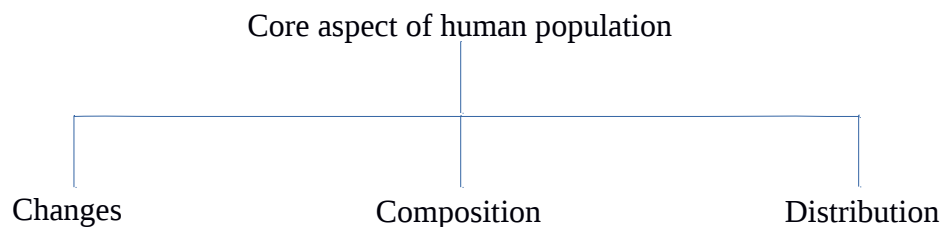
Now, demography, as a very general science, can analyze any kind of dynamic living population, one that changes over time or space. It (Demography) is a field that is of special importance to sociology because of two processes-

a) formation of nation-states

b) beginning of modern science of statistics.

The modern state began to expand its role and functions such as taking active interest in development of early forms of health care, policing and maintenance of law and order; economic policies related to agriculture.

This constantly expanding sphere of activity of the state required systematic and regular collection of social statistics which is the quantitative data on various aspects of population and economy.

Hence, demography, is a scientific study of human population that focuses on three core aspects:

Core aspect of human population

Changes   Composition   Distribution

1. **Changes** in population size

2. **Composition** of population
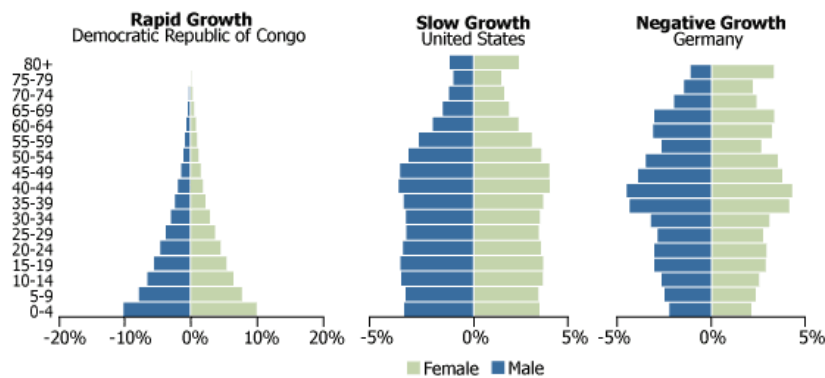
3. **Distribution** of Population

To reiterate the core aspects---

When we look at the first core aspect, **four factors, birth rate, death rate, immigration and emigration bring about changes in the population.**

1. Changes in population size

Look at the bottom figure the population change is visible from the shape of the three patterns of population change. The age-sex structure of a country can be studied through population pyramids. The overall shape of the pyramid indicates the potential for future growth. The four representations of population age-sex structure provide an overall example of what a pyramid for distinct levels of population growth would look like — rapid growth, slow growth, zero

growth, and negative growth. The horizontal bars show the percentage (or in some cases the actual numbers) of males and females in each age group. Apart from the total size it is the demographic characteristic of age and sex that determines the specific growth of specific age group and the total population.

2. Composition of population refers to the description of a population according to the characteristics of the population such as age and sex, education, occupation etc. The composition of a population is important as for example, age composition is important for the proportions of children and older persons have much to do with the balance of national expenditures on schools, childcare, immunization and reproductive health, as against expenditures on old-age and health care for chronic and degenerative disease

3. Distribution of Population as stated earlier, refers to how population is distributed relative to some resource. Population of the world or of any country is not uniformly distributed. The same is true about India. Some parts of the country are densely populated, some parts moderately populated and some parts are sparsely populated, reason being a **variation in Physical Factors** such as climate, soil, and availabilty of natural resources and social Economics factors etc. To talk of landforms, the most important attributes of landforms which determine population density and distributions are the altitude and slope. The most striking evidence of the influence of altitude and slope on population density and distribution have been observed between mountains and plains. For example, take the case of most densely populated IndoGanga plains on the one hand and a highly mountainous state of Arunachal

Pradesh on the other. Other than this, factors like drainage, and water table have also been affecting population distribution.

a) Talking of **climate,** it influences the spatial distribution of population through temperature conditions and the amount of precipitation. Take the case of hot and dry deserts of Rajasthan and the cold and wet Eastern Himalayan region where very low temperature and heavy precipitations prevail. This is the reason for uneven distribution and low density of population here. Almost even distribution and high density of population are found in plains of Kerala and West Bengal where rainfall is high. It is low in the regions of Rajasthan, and lee-ward sides of Western Ghats. (The leeward side is the drier side or the side where the trade winds pass after they hit a mountain. The windward side is the wetter side.)
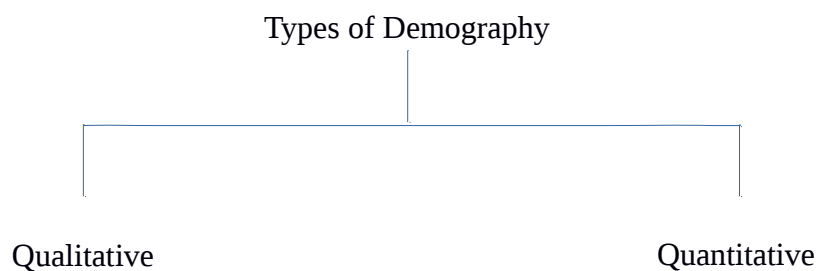
b) Looking at soil as a factor alluvial region of northern plains and coastal and deltaic regions of India continue to support high densities of population. On the other hand, vast tracts of land in desert areas like Rajasthan, Rann of Kuchchh in Gujarat,Terai region in Uttarakhand have been suffering from problems like soil erosion, which support only low density of population.

Socio-Economic Factors that led to the distribution of the population. Factors such as socio-cultural and political factors; and exploitation of natural resources. Let us take the example of Mumbai---Enterprising trading and business communities of Parsis, Kuchchhis and Gujaratis played a leading role in setting textile mills, development of water power and laying roads and railways across the Western Ghats connecting it with its surroundings. The Suez international navigation canal made Mumbai the nearest Indian port to Europe. Since then, the availability of educated youth from Mumbai and Pune and inexpensive and disciplined labor from neighboring towns all contributed to the rapid population growth.

c) Looking at Availability of Natural Resources: The Chhotanagpur Plateau region has all along been a rocky and rugged terrains. This rainy and forested region has been a home of several tribes and was one of the sparsely populated parts of the country. Today, a string of industrial towns and centers have sprung up over the past century soon after rich minerals such as iron-ore, manganese, limestone, coal etc. were found in unusual abundance and close to one another. The rich coal and iron fields have attracted heavy industries particularly iron

and steel, heavy engineering, metallurgy and transport equipment industries. The region has also important super-power thermal stations from where power is supplied to far off areas. After liberalization, many multi-nationals as well as national companies have been establishing their industries in large numbers leading to a spatial distribution of the population.

Now, let us **understand the types of Demography** which is significant for demographic studies.

Types of Demography

Qualitative   Quantitative

Demography, also, essentially a mathematical tool, that studies the

- **Qualitative aspect** includes

  ✓ the **sociological factors** such as literacy, education quality, crime, development, diet and nutrition,

  ✓ **ethnicity** (race, mother tongue)

  ✓ **social characteristics** such as marital status, class, wealth, wellbeing, etc.) and

  ✓ **economic characteristics** such as employment status, occupation, income

- **Quantitative aspects**- includes

  ✓ the composition, density, distribution, growth, movement, size, and structure of the population. All of which was discussed a few minutes ago.

Furthermore, Quantitative aspect, is a statistical study of population, especially of human beings. Since, Independence and even before Independence India has always conducted a Ten

yearly (decennial) census, to know the trend and changes that are determined by the factors such as Birth rate, Death Rate, Migration.

Thus, the two broad distinct types of demography that are found are, **formal demography** which is a largely quantitative field, and **social demography** which focuses on the social, economic or political aspects of populations.

To state an example, many people who are illiterate and poor, coming from Bangladesh to India, are creating problems or difficulties particularly in the states of West Bengal and Assam. So, the migration planning made by government and non-governmental agencies to overcome the problem of migration, becomes the main study of social demography.

Now, where do we gather the data from… It is the various sources such as Census, National Survey, Demographic studies that, enables us to gather or collect demographic statistics or data. This data is then collected through demographic studies undertaken.

But**, why do we need to undertake demographic studies?** All demographic studies are based on processes of counting or enumeration.

 What is enumeration? It is a complete, ordered listing of all the items in a collection – such as the census or the survey. Survey, involves the systematic collection of data on the people residing within a specified territory.

Why population census? The Population Census is the procedure of systematically acquiring and recording information about the members of a given population. It provides the fullest and most reliable picture of the country's population. Data is collected at a specified time from **the entire population.** The Population Census is unique in that it provides the possibility of examining small and special population groups, and acquiring information on small geographic units (localities, neighbourhoods).

In India, censuses began to be conducted by the British Indian government between 1867-72, and regular ten yearly (or decennial) censuses have been conducted since 1881. Independent India continued the practice, and six decennial censuses have been conducted since 1951, the most recent being in 2001. The Indian census is the largest such exercise in the world (since China, which has a slightly larger population, does not conduct regular censuses).

What is the significance of the Demographic Data collected ....

Once **demographic data is collected**, it **becomes important** for the planning and implementation of state policies, especially those for economic development and public welfare. And, since, the scope of demography is increasing, its importance also widens, such as, for health planning, planning food supplies, house planning, employment planning, educational planning etc.

Let us look at some examples to know how………

For instance, **Unemployment** is a social and international problem. From developed countries to developing and undeveloped countries, the unemployment problem is growing rapidly. A **demographic factor, is the high dependency ratio in less developed countries**. So, **for employment planning population study and dependency ratio becomes essential to be studied**.

Keeping certain facts in mind---India is the second most populous country in the world next only to China. China, the most populous country of the world, is a step ahead of us as every fifth person in the world there is a Chinese. While India possesses only 2.42% of the world's total land area, she is required to sustain almost 17% of the world's population. In terms of area, India stands seventh preceded by Russia, Canada, China, the United States of America, Brazil and Australia. Barring China, the total population of these large five countries is far less than that of India. The total area of these five countries is sixteen times more, whereas their total population is much less than that of India. This may be partly, the reason why we have become handicapped because of our huge population.

To conclude, understanding the **CONCEPT, EMERGENCE, TYPES, SIGNIFICANCE OF DEMOGRAPHY enables us, the government and our society to handle and deal better the issues and demands of population growth, aging and migration.** The statistics and predictions resulting from demographic studies aids in the development of adequate school systems, estimate the required funding for senior services and develop workable healthcare systems.