UNIT - III

Population Explosion

1. Factors Determining Population Birth Rate

The birth rate of an area is determined by the number of live births per one thousand people over a certain time. This rate is not to be confused with fecundity rate, the number of children that could be born per one thousand women of reproductive age. Higher birth rates typically result in a higher percentage of population growth, while lower birth rates usually result in a lower percentage of population growth. Birth rates are impacted by the education, healthcare, and societal expectations for women in a given area.

Birth rates are lower in countries where citizens have access to education about contraceptive measures. Another factor impacting birth rates is infant mortality. Infant mortality is lower in countries where women have access to comprehensive healthcare during pregnancy and childbirth, resulting in a higher birth rate. Additionally, in countries where women make up a large part of the workforce, birth rates are lower due to women choosing to work instead of having children. In 2021, the world's birth rate was 17.87. That same year, China had a birth rate of 11.15, while Pakistan had 27. Chinese women have access to contraceptive education and healthcare and are encouraged to work; Pakistani women are not encouraged to go to school or become a part of the workforce. While birth rate is indicative of a country's overall population, it is not the only factor that influences growth.

Death Rate

The death rate of an area is determined by the number of deaths per one thousand people over a certain period. Higher death rates typically result in a lower percentage of population growth, while lower death rates usually result in higher population growth. Like the birth rate, a country's death rate is impacted by various factors. Any event, like war, natural disasters, or disease outbreak, can cause an increase in the death rate. Access to healthcare and education also play a role in a country's death rate. Subtracting the number of deaths from the number of births in a given country calculates its natural population change. Ideally, this number should not be very high or far into the negative. A very high

number means that a country may be overpopulated, and a large negative number means that a country may be losing population at an alarming rate.

Migration

What factors can influence how populations change over time? The third factor of population change, migration, is the movement of people from one area usually a country - to another. When people move from one country to another, the terms used are immigration and emigration. Immigration is the act of moving *into* a country, and emigration is the act of moving *out of* a country. When a person migrates to another country, they are considered an immigrant to the country they moved to and an emigrant from the country they left. Subtracting a country's immigrants from its emigrants calculates net migration, which is also considered when determining population change.

Like natural population change, a country's net migration should ideally not be very high or far into the negative. A very high number means a country may be experiencing more immigration than it can handle. A large negative number indicates that people are leaving a country rapidly. People may choose to leave a country for various reasons. Still, a high number of emigrants suggests that a country is in turmoil, whether the cause is war, famine, or lack of economic opportunity.

Another type of migration is moving from rural areas into cities, known as urbanization. One example of this is the movement of Americans to cities like New York, Philadelphia, and Boston during the Industrial Revolution. Technological advancements resulted in flocks of U.S. citizens leaving a rural lifestyle in favor of jobs in the city.

2. Population explosion causes and effects

Causes of Overpopulation

- Increased Life Expectancy: While the average annual birth rate in India, which was 42 per thousand in 1951-61, decreased to 24.8 per thousand in 2011, the country has seen its decadal death rate decline to 8.5 in 2001-2011 from 42.6 in 1901-1911. Since the death rate has also gone down sharply, the population has tended to grow very fast in India.
- Lack of family planning: If we add the number of miscarriages (6.20 lakh in 2010-11) in the country with an estimated number of births (2.05 crore

in 2010-11) in one year, even in this age of family planning, one woman, on an average, is pregnant at any time in the age group of 15-45 years. All this happens because a large number of people in our country are illiterate with no awareness about the various advantages of family planning and the ill-effects of overpopulation on society.

Early marriage: Child marriage is one of the major social problems of our country. Even today, a large number of boys and girls are married at an age when they are not prepared for family responsibilities either socially, emotionally, physically and mentally. Marriage at unripe age also leads to higher mortality rate of infants.

Lack of education: The failure of family planning is directly related to large-scale illiteracy that also contributes to early age of marriage, low status of women, high child-mortality rate etc mentioned above. Uneducated families cannot grasp the issues and problems caused by the increasing population rate. They are least aware of the various ways to control population, usage of contraceptives and birth control measures.

Religious reasons: The people who are conservative and orthodox are opposed to the use of family planning measures. Women in such families are not allowed to take part in family planning because they are not supposed to go against the wishes of God. There are also women who argue that children are born with God's will and women are destined to give birth to children. Muslim households have more birth rates than Hindu communities. Surveys among Muslims from time to time have found that despite the awareness of modern family planning measures, most respondents, both women and men, are against their use due to religious reasons and fatalistic outlook.

Compulsions of poverty: Poverty is another reason for the increase in population in our country. Many poor parents produce more children not because they do not have the knowledge about contraceptives, but because they require children to assist them in earning their livelihood. It is clear from the fact that there is unending number of child labourers in our country. If poor families stop the children from working, their family income tends to fall way short of meeting their basic needs. **Problem of mind-set**: Generally, illiterate and uneducated children inherit their father's behaviour and choose to give birth to as many children as is necessary to increase the income of their family. As a son is supposed to be the bread earner of the family, the poor do not mind producing any number of girl children in their desire to be ultimately blessed by a male child.

Effects of Overpopulation

- **Burden on natural resources:** Overpopulation leads to over-exploitation of natural resources. Increasing population puts further burden on the earth's capacity to produce food and water and other natural resources. As a result, the underprivileged people have to suffer malnutrition, starvation and unhealthy living conditions Excessive increase in population leads to grave forms of pollution and deforestation.
- **Rise in poverty:** Overpopulation leads to the vicious circle of illiteracy, unemployment and poverty. Lack of education deprives the people of the opportunities to earn their livelihood and fulfil the bare necessities of their lives.
- Widening the rich-poor gap: Overpopulation leads to an unequal distribution of wealth and income. Consequently, the gap between the rich and poor is widened further.
- **Migration of Population:** Migration is a natural human trait. When the burden of population in any area becomes imbalanced compared to the available financial resources, people tend to move away from their original location. It is comparable to the phenomenon of bee hive when it is completely filled, flies leave it and go elsewhere. Similarly, human beings stop at one place for a time and then feel the urge to move on again. For this reason, human beings generally do not live anywhere permanently except for a few exceptions.

3. Consequences of population explosion

1. Pressure on food, clothing & housing: A country with fast growing population has to face a serious problem of scarcity of necessary food, minimum clothing & proper housing facilities, which are basic needs of human life. Thus, it affects the life style and results slum areas, starvation etc.

- 2. Unemployment: The overpopulation aggravates the unemployment & disguised unemployment problem. The vacancy rate is negligible as compared to wants of employment, which ultimately results into low income groups and large families depending upon single earning person (earner).
- **3. Standard of living:** The overpopulation creates or give rise to large families with low income reducing the standard of persons living therein. The slum areas, starvation and frequently epidemics are the results affecting health and standard of persons within such nation.
- 4. Decrease of forest area: The basic made of the growing population is of residence and shelter. To construct houses and place of shelter, man is greatly cutting and reducing forest to make a place to live.
- **5. Environmental pollution:** Over populated passion creates a large affect on the environment by exhausting a large proportion of waste. On the other hand reducing forest which results the growth of pollution.
- **6. Education:** The low income of large family dose not afford to provide education to their children. Which results into creating a problem of illiteracy and again none awareness among the class.
- 7. Energy crisis: Population explosion accompanied with rapid industrialization and urbanization has led to greater demand for already deficient energy (fuel wood, fossil fuel and electricity).
- **8. Hygienic condition:** More people in a small area breed unhygienic condition which has ill effects on human health.
- **9.** Eco-degradation: Overpopulation leads to eco-degradation by increasing air, water, soil and noise pollution, unhygienic condition, deforestation leading to flood and soil erosion. So rapid human population growth is creating increased pressure on the infrastructure, economy, environment, availability of primary health care and nutrition.

4. Ways to control population growth

1. Minimum age of Marriage:

As fertility depends on the age of marriage. So the minimum age of marriage should be raised. In India minimum age for marriage is 21 years for men and 18

years for women has be fixed by law. This law should be firmly implemented and people should also be made aware of this through publicity.

2. Raising the Status of Women:

There is still discrimination to the women. They are confined to four walls of house. They are still confined to rearing and bearing of children. So women should be given opportunities to develop socially and economically. Free education should be given to them.

3. Spread of Education:

The spread of education changes the outlook of people. The educated men prefer to delay marriage and adopt small family norms. Educated women are health conscious and avoid frequent pregnancies and thus help in lowering birth rate.

4. Adoption:

Some parents do not have any child, despite costly medical treatment. It is advisable that they should adopt orphan children. It will be beneficial to orphan children and children couples.

5. Change in Social Outlook:

Social outlook of the people should undergo a change. Marriage should no longer be considered a social binding. Issueless women should not be looked down upon.

6. Social Security:

More and more people should be covered under-social security schemes. So that they do not depend upon others in the event of old age, sickness, unemployment etc. with these facilities they will have no desire for more children.

7. More employment opportunities:

The first and foremost measure is to raise, the employment avenues in rural as well as urban areas. Generally in rural areas there is disguised unemployment. So efforts should be made to migrate unemployed persons from rural side to urban side. This step can check the population growth.

8. Development of Agriculture and Industry:

If agriculture and industry are properly developed, large number of people will get employment. When their income is increased they would improve their standard of living and adopt small family norms.

9. Standard of Living:

Improved standard of living acts as a deterrent to large family norm. In order to maintain their higher standard of living people prefer to have a small family. According to A.K. Das Gupta those who earn less than Rs. 100 per month have on the average a reproduction rate of 3.4 children and those who earn more than Rs. 300 per month have a reproduction rate of 2.8 children.

10. Urbanisation:

It is on record that people in urban areas have low birth rate than those living in rural areas. Urbanisation should therefore be encouraged.

11. Late Marriage:

As far as possible, marriage should be solemnized at the age of 30 years. This will reduce the period of reproduction among the females bringing down the birth rate. The govt. has fixed the minimum marriage age at 21 yrs. for males and 18 yrs. for females.

12. Self Control:

According to some experts, self control is one of the powerful methods to control the population. It is an ideal and healthy approach and people should be provided to follow. It helps in reducing birth rate.

13. Family Planning:

This method implies family by choice and not by chance. By applying preventive measures, people can regulate birth rate. This method is being used extensively; success of this method depends on the availability of cheap contraceptive devices for birth control. According to Chander Shekher, "Hurry for the first child, Delay the second child and avoid the third."

14. Recreational Facilities:

Birth rate will likely to fall if there are different recreational facilities like cinema; theatre, sports and dance etc. are available to the people.

15. Publicity:

The communication media like T.V., radio and newspaper are the good means to propagate the benefits of the planned family to the uneducated and illiterate persons especially in the rural and backward areas of country.

16. Incentives:

The govt. can give various types of incentives to the people to adopt birth control measures. Monetary incentives and other facilities like leave and promotion can be extended to the working class which adopts small family norms.

17. Employment to Woman:

Another method to check the population is to provide employment to women. Women should be given incentive to give services in different fields. Women are taking active part in competitive examinations. As a result their number in teaching, medical and banking etc. is increasing rapidly. In brief by taking, all there measures we can control the growth of population.

5. Means of achieving stable population

- 1. Child Health Services (HCS) should address the health infrastructure.
- 2. Free education up to 14 years
- 3. Child mortality should be brought below 30%.
- 4. During childbirth, maternal mortality should be controlled.
- 5. Children should be vaccinated to prevent disease.
- 6. Marriage age should be increased above 20 (m).
- 7. 100% registration of births, deaths, marriages.
- 8. Prevention of infection like AIDS.
- 9. Small family program should be encouraged
- 10.Encourage self help group.
- **11.**Primary education should be provided free of charge
- 12.Non-governmental organizations should be involved.

6. Theories of Population

Malthusian Theory

- Thomas Robert Malthus (1766-1834) was a significant pioneer in population statistics research.
- His population formulation was a watershed **point in the population** throughout history. He broadened the connection between demography and social development.
- The rate of **human reproduction** surpassed the rate at which land subsistence could be increased.

- Malthus went on to suggest that if population growth is unchecked, it will increase in a geometrical proportion. Subsistence increases only in an arithmetic ratio.'
- In summary, **Malthusian theory** holds that the population must be limited through means of support.
- Unless there are some incredibly major and obvious constraints, the population will inevitably increase as means of subsistence improve.
- Malthus was also chastised by liberal and **Marxist scholars** for claiming that population expansion was the source of poverty.
- Critics contended that problems such as poverty and malnutrition were driven by unequal allocation of economic resources rather than population expansion.
- An unfair social structure permitted an affluent and privileged minority to live in luxury while forcing the great majority of people to live in poverty.

Optimum Population Theory

- The **optimal population** size is the population size that generates the most income per head.
- Any increase or reduction in population size that is greater than or less than the ideal level affects income per head.
- There is a **population size** that correlates to the highest per capita income given a country's **natural resource pool**, **production technology**, and **capital stock**.
- All else being equal, any deviation from the optimal population size results in a loss in per capita income.
- If **population expansion** is accompanied by an increase in per capita income, the country is under-populated and can afford to increase its population until it reaches the ideal level.
- The **optimum point** has the maximum per capita income; beyond that, the average labor output begins to drop.
- The **ideal population** is not a fixed point; it varies when any of the components changes.
- When manufacturing methods and procedures improve, production per person rises and the optimum point shifts upward.

- As the country's natural resource supply expands, so will its optimum point.
- The **optimal population** is liable to change in reaction to changes in the means of production, both quantitative and qualitative.
- As a result, the ideal point is always shifting upwards or downwards.
- It cannot permanently determine a country's ideal population since its productive **elements and processes** vary throughout time.

7. Stages of population growth

First Stage

- The country is at a low level of economic development in the first stage.
- Agriculture is the people's main source of income.
- The people's standard of living is low.
- Due to a lack of medical facilities, epidemics, famines, and illiteracy, the death rate is high.
- Because of social and economic factors, the birth rate is high.
- The most notable characteristics of this stage are as follows:
 - The bottom of the **population pyramid** is **expanding** in the first stage.
 - A stable population with a high birth rate, a high infant mortality rate,
 - and a high death rate results in a low life expectancy.
 - There are a lot of young people and very few older people.
 - A society with a high fertility rate (8 or higher).
 - A religiously dominated society.
 - The economy is stagnant, and there is no surplus subsistence type of living.
 - Sierra Leone and Somalia are two examples.
- The first stage has a high fertility rate and a high mortality rate because people reproduce more to compensate for deaths caused by epidemics and erratic food supply.
- Population growth is slow, and the majority of people work in agriculture, where large families are advantageous.
- Life expectancy is low, and the majority of the population is illiterate and lacks access to modern technology.
- All of the world's countries were at this stage **two hundred years ago**.
- This is also called the Stage of High Birth Rate and High Death Rate.

Second Stage

- The birth rate is high but the death rate is low at this stage. As a result, the **population grows at a rapid pace**.
- At this point, income begins to rise and economic activity begins to expand.
- The death rate is rapidly decreasing as a result of improved health care and a nutritious diet.
- Due to social backwardness and limited access to contraception, the birth rate remains high.
- The most notable characteristics of this stage are as follows:
 - The population pyramid is rapidly expanding at this stage.
 - Population growth has been extremely rapid (population explosion)
 - The death rate is rapidly declining, but it remains lower than the birth rate.
 - The fertility rate is still high.
 - A high rate of birth
 - Rapid Natural growth
 - Decrement in Infant mortality
 - A large number of teenagers
- Fertility remains high at the start of the second stage, but it gradually declines.
- This is accompanied by a decrease in mortality.
- Improvements in sanitation and health care result in a decrease in mortality.
- Because of this disparity, the net addition to the population is substantial.
- This is also called the **Stage of High Birth Rate and Low Death Rate or Stage of Population Explosion.**

Third Stage

- In the third stage, low population growth is caused by a declining birth rate and a low death rate.
- Along with the country's economic development, structural changes in the economy begin to take place.
- A large population begins to congregate in cities. People begin to view large families as a liability.
- As a result, the birth rate begins to fall. The death rate remains low.

- The population's growth rate starts slowing down. **India** is in the midst of a demographic transition.
- This stage's most notable characteristics are as follows:
 - The third stage of the Population Pyramid is the Stationary
 - Decreasing Population growth.
 - Rapid decline in the birth rate.
 - The drop in fertility rates.
 - The gradual decrease in the death rate.
 - The birth rate approaches the death rate.
 - Longer life expectancy.
 - An increasing number of senior citizens
- This is also called the Stage of Declining Birth Rate and Low Death Rate.

Fourth Stage

- **Population stabilization** occurs in the fourth stage when there is a low birth rate and a low death rate.
- People's standard of living rises dramatically at this stage as a result of rapid economic development.
- The size of the family has a higher priority in terms of quality of life.
- This stage's most notable characteristics are as follows:
 - Shrinking Population Pyramid.
 - Stable or slow population growth.
 - Lower birth rate.
 - Lower death rate.
 - Longer life expectancy.
 - The birth rate is roughly equal to the death rate.
 - The fertility rate is close to or lower than 2.1.
 - There will be many elderly people.
- Fertility and mortality both decline significantly in the final stage.
- The population is either stable or slowly increasing.
- The population becomes **urbanised**, **literate**, and **technologically advanced**, and family size is deliberately limited.
- This demonstrates that humans are extremely adaptable and capable of adjusting their fertility.
- Different countries are currently in various stages of demographic transition.

• This is also called the **Stage of Low Birth Rate and Low Death Rate**.

8. Human Development Index

The Human Development Index (HDI) is a statistic developed and compiled by the United Nations since 1990 to measure various countries' levels of social and economic development. It is composed of four principal areas of interest: mean years of schooling, expected years of schooling, life expectancy at birth, and gross national income (GNI) per capita.

The HDI was established to place emphasis on individuals—or, more precisely, on their opportunities to realize satisfying work and lives. Evaluating a country's potential for individual human development provides a supplementary metric for evaluating a country's level of development besides considering standard economic growth statistics, such as gross domestic product (GDP).

This index also can be used to examine the various policy choices of nations; if, for example, two countries have approximately the same GNI per capita, then the HDI can help to evaluate why they produce widely disparate human development outcomes. Proponents of the HDI hope it can be used to stimulate such productive public policy debate.

The HDI is a summary measurement of basic achievement levels in human development. The computed HDI of a country is an average of indexes of each of the life aspects that are examined: knowledge and understanding, a long and healthy life, and an acceptable standard of living. Each of the components is normalized to scale between 0 and 1, and then the geometric mean of the three components is calculated.

- The health aspect of the HDI is measured by the life expectancy, as calculated at the time of birth, in each country, and normalized so that this component is equal to 0 when life expectancy is 20 and equal to 1 when life expectancy is 85.
- Education is measured on two levels: the mean years of schooling for residents of a country, and the expected years of schooling that a child has at the average age for starting school. These are each separately normalized so that both 15 mean years of schooling and 18 years of expected schooling equal 1, and a simple mean of the two is calculated.
- The economic metric chosen to represent the standard of living is GNI per capita based on purchasing power parity (PPP), a common metric used to reflect average income. The standard of living is normalized so that it is

equal to 1 when GNI per capita is \$75,000 and equal to 0 when GNI per capita is \$100.

9. Census of population

The Census 2011 is the 15th National census survey conducted by the Census Organization of India. Mr. C. Chandramouli is the Commissioner & Registrar General of the Indian 2011 Census. The 2011 Indian National Census has been conducted in 2 phases - house listing and population. The national census survey covered all the 28 states of the country and 7 Union territories including 640 districts, 497 cities, 5767 tehsils & over 6 lakh villages.

The Indian Population Census 2011 covered a number of parameters during the survey. These parameters include population, growth rate in population, rate of literacy, density of population, sex ratio and child sex ratio (0-6 years). According to the census reports of Indian Census 2011, the population of India is 1,210,854,977 with 623, 724, 248 males and 586,469, 174 females. The total literacy rate in the country at present is 74.04%. The density of population is 382 persons/sq.km. In regards to sex ratio, at present there are 940 females on average on per 1000 males and the child sex ratio is 914 females per 1000 males.

The Indian Census survey is conducted to gather information from the grass root base which is essential to launch different welfare schemes like Annual Plans, 5 Year Plans etc. in the country for the privilege of common man here. The Houselisting & Housing Census provides extensive information on the status of the human settlements, the housing deficits as well as the different housing necessities to be looked for formulating the housing welfare policies.

The Population Enumeration offers needed Census data about land & its people in the present time. The survey reveals the current population trends, its varied characteristics that are valuable inputs for planning sound programs and policies aimed towards the welfare of India & her people and also for effective public administration.

10. Indian population growth rates

India's growth rate has declined significantly over the past few decades, attributed to growing urbanization, rising education levels, specifically among women, and increasing alleviation of poverty.

While India's population growth has slowed remarkably over the last few years, it's still growing faster than China and is expected to surpass China in population by 2026, when both will have about 1.46 billion people. After 2030, India is expected to be the most populous country in the world.

India is expected to reach its peak population of 1.65 billion people by 2060, after which it will begin to decrease. The number of children in India peaked over a decade ago and is now decreasing.

India Population Growth

The 2011 census was the second largest the world has ever seen - second only to China's census the previous year. It took place in two phases. The first phase, in April 2010, counted all of the buildings in India, and the second phase collected data about the people of India.

The census was a massive exercise, employing millions of Indians. The total cost of the census came to \$439 million which was actually considerably cheaper per person than most censuses held around the world. The average census costs over \$4 per person, whereas the census in India cost just \$.50 per person.

The 2011 census was the fifteenth nationwide census carried out in India. The first was held in 1881, although it was not able to cover all of the British-held Indian territory.

India Population Projections

India's population continues to grow fairly steadily as the years progress. Most notably, the population is growing faster than China's. India is expected to surpass China as the world's most populous country around 2024, but like China, the growth is expected to stagnate and eventually decrease in the latter half of the 21st century.

11. National Population Policy

Present National Population Policy (NPP) 2000

- It was founded on the tenets of free will, informed consent, and achieving a level of fertility equivalent to replacement.
- It attempted to tackle the problems of contraception, maternal health, and child survival all at once.
- The National Family Planning Programme of the Ministry of Health & Family Welfare directs and coordinates the execution of the National Population Policy 2000.

New population policy is required, and NPP 2000 has to be changed.

• Data from the Economic Survey 2018–19: The peak of India's demographic dividend is anticipated to occur around 2041, when 59% of the population will be of working age. By the end of the century, however, it is anticipated that global population will peak and then begin to decline.

- Aging: The globe is ageing significantly as lifespans increase and fertility rates decline globally. By 2025, the elderly would make up 12% of India's overall population. By 2050, every fifth Indian will be older than 65.
- **Productivity:** According to **Thomas Malthus' population theory, population increase and productivity should be in balance**. The current population needs to receive targeted skills training and better economic planning in order to become productive and employable.
- Chinese experience teaches us that population management policies should not be drastically altered lest unintended effects result. For instance, China's one child policy resulted in a steep decline in the pace of population growth but also in a high increase in the number of elderly people.
- Evidence-based policy: Rather than putting an excessive amount of emphasis on lowering the fertility rate, the Indian government should concentrate on setting up conditions to ensure progressive adjustments in family size within the framework of a developing economy.
- Automation: In the modern world, people's productivity is significantly impacted by automation, which can occasionally result in job loss. But it doesn't take the place of human nature and touch. Consider the unregulated care industry.
- India has a very small window of time (the next few decades) to capitalize on the potential of its young people by investing in their education, skills, and general well-being. Otherwise, India's demographic advantage could turn into a demographic catastrophe.
- Gender issues: The fall in fertility lessens the load on women. However, as women typically live longer than men, they make up two-thirds of the senior population. India must therefore acknowledge the gender component of population policy in order to benefit from these changes.
- Gender-neutral employment: India needs to raise the percentage of women employed and boost work possibilities for young women. Elderly women require networks of financial and social assistance.
- India's future depends on maximizing the potential of its youth, particularly in the states of Uttar Pradesh, Bihar, and Madhya Pradesh, where the Total Fertility Rate (TFR) is greater than the country's average. These States require greater funding and assistance to guarantee

their employment, skill development, and education lest they incur a significant financial liability.

- It was a well-intentioned initiative that aimed to lower maternal death rates and promote family planning. Additionally, states have their own population plans. However, it must give attention to both reproductive health and the ageing population.
- **Discussion of population policy has changed:** The conventional narrative of population control can give way to a policy that **values people as resources for India's growth**. The emphasis must shift to ensuring a contented, healthy, and effective populace.
- The two-child norm suggests a coercive method that targets a single population in particular. It draws attention away from the contemporary, intricate population-related issues. It shouldn't be the main goal of population strategy, but it can be one at most.

12. Difficulties in implementation of family planning program

The concept of family planning implies both the limitation of the family to have only the desired number of children which are considered appropriate to the resource availability of the family as well as having proper spacing between children. The concept helps to empower women in economic, social and political spheres. It aims to change the child bearing behaviour of women and improve the health status of women and thus reducing the population growth in a country.

From 1977, the Family Planning Programme in India is called as the Family Welfare Programme which places a special emphasis on the welfare of the people.

Components of family-planning programme

- Information, awareness, education and communication activities,
- Contraceptives: Supply and Service,
- Research,
- Training of field personnel, and
- Administrative infrastructure.

Barriers to Family Planning in India

- Fatalism and religious beliefs which places emphasis on the need to have children in India,
- Birth control measures are not always acceptable to the people because of their perceived side effects, anaesthetic attributes etc.

- Methods of family planning are not equally effective. For example, the conventional contraceptives are only 50% effective.
- In some cases, supplies and services related to family planning are not easily available.

Suggested Measures to control Population Growth in India Incentives Vs Disincentives

There is a debate among the thinkers on which method to follow to control population explosion in India. They are confused *between cooperation vs. coercion, incentives vs. disincentives, Kerala model vs. Chinese model.* In this regard, the Nobel laureate Amartya Sen has favoured cooperation approach in place of coercion.

Developing Acceptable Contraceptives

New cheap, easy-to-use, side-effects free contraceptive which will be more acceptable to the people needs to be developed. Performing research on health status and dietary habits of some of the tribes of Andaman and Nicobar Islands who have extremely low fertility rates may provide a solution.

Increase in Marriage Age

Various studies, especially those conducted in Kerala have shown that there exists direct relationship between age of marriage and size of family.

Social Empowerment

Social empowerment of people by means of education, employment opportunities and access to public health facilities can help in arresting population growth.

Role of NGOs

NGOs have intimate relation with the people of a nation and acts as a bridge between people and the government. Hence, they play a prominent role in dismantling the deep rooted beliefs favouring male children and large families. Also, their role is very important in ensuring success of government policies as they have the capacity to penetrate into the remote areas of the country.

Economic Development

According to noted demographer, Dumont, there exist inverse relationship between per-capita income and a country's birth rate. With increase in economic prosperity, people will feel more secure and may not desire more children in order to supplement their income. Hence, economic development will help in controlling the population growth rate of a country.

UNIT - III

Decreasing Infant Mortality Rate

Since, Infant Mortality Rate (IMR) is high in India, people tend to bear more children in an expectation that at least some children survive up to their adulthood. Hence, the infant mortality rate has to be decreased by universal vaccination, maternity and child care etc.

13. Swami Nathan Committee Recommendations:

- 1. Stabilising population by achieving a total fertility rate of 2.1 by 2010 A.D.
- 2. Implementing a speedy and effective minimum needs programme.
- 3. Replacing the present vertically structured family welfare programme with decentralised, democratic planning through panchayats, nagar palikas and state legislatures.
- 4. Abandoning the idea of fixing targets for the use of specific contraceptive methods by the central and state governments, except the goal of achieving the national average of fertility rate.
- 5. Discontinuing incentives in cash or kind to contraceptive users and motivators. Instead, a Population and Social Development Fund may be set up out of the funds available from government and international donor agencies. This fund will be utilised for filling the gaps in the effective implementation of the village, town, district and state level socio-demographic charters.
- 6. Appointing a State Population and Social Development Commission to plan, implement and monitor the population policy of the country. The sub-committees of PSDC will also be set up at the state, district and panchayat levels comprising elected representatives of people from different political parties, professionals, representatives of NGOs and women's and youths' organisations.
- 7. Sadly, Family Planning has become a responsibility of women alone. As such, there is a clear need for checking this trend of putting the entire responsibility for family limitation on women.

Some socio-economic and medical goals set by the Committee in the field of population welfare for forming a necessary part of the national population policy were:

- 1. Reducing the incidence of marriage of girls below the age of 18 years to zero;
- 2. Increasing the percentage of deliveries conducted by trained personnel to 100 per cent;

- 3. Reducing the infant and maternal mortality rates;
- 4. Universal immunization of children against tuberculosis, polio, diphtheria, whooping cough, tetanus and measles;
- 5. Provision for primary health care for all;
- 6. Providing information to individuals on birth limitation methods so that they have the fullest choice in planning their families;
- 7. Making available and accessible quality contraceptive services on a universal basis; and
- 8. Universalisation of primary education.

14. Population Policies Under Five Year Plans

- First Five Year Plan: In 1952, India became the first country in the world to implement a population control programme. It emphasised the use of natural family planning devices.
- Second Five-Year Plan: Work was done in the areas of education and research, with a focus on the clinical approach.
- Third Five Year Plan: The sterilisation technique for both men and women was adopted under the Third Five-Year Plan in 1965.
- The copper- T technique was also used. The **Family Planning Department** was established as a separate entity.
- Fourth Five-Year Plan: All forms of birth control were encouraged (both traditional and modern).
- Fifth Five Year Plan: The National Population Policy was announced on April 16, 1976, as part of the fifth five-year plan.
- The **Sharda Act of 1929** set a minimum age for marriage, which was raised under this policy.
- It raised the minimum age for boys to 21 years old and for girls to 14 years old.
- On the basis of the 1971 census, the number of MPs and MLAs was fixed until 2001.
- Forced sterilisation was permitted under this plan, but it was later abolished.
- The name of the Family Planning Department was changed to **Family Welfare** Department by the Janata Party government in 1977.

- Sixth to Eighth Five Year Plan: Efforts were made to control population in the Sixth, Seventh, and Eighth Plans by determining long-term demographic goals.
- Ninth Five-Year Plan: In 1993, the government established an expert group to formulate national population policy under the chairmanship of M.S. Swaminathan.
- Despite the fact that this group drafted a new population policy in 1994, it was reviewed by the Family Welfare Department in 1999 and passed by Parliament in 2000.
- In February 2000, the central government released the "new national population policy."

