UNIT 4
Human Population and Environment

POPULATION GROWTH

Population is a group of organisms of a particular species, sharing a particular characteristic of interest, most often that of living in a given area at a specific time.

Population growth is the change in a population per unit time. Population growth can be positive, static or negative.

Major Periods of Growth of Human Population

As of January, 2023, the human population of the world is 7.9 billion (estimated by the United States Census Bureau).

Estimates	Medium series projections
1 billion in 1804	7 billion in 2012 (13 years later)
2 billion in 1927 (123 years later)	8 billion in 2027 (15 years later)
3 billion in 1960 (33 years later)	9 billion in 2048 (21 years later)
4 billion in 1974 (24 years later)	
5 billion in 1987 (13 years later)	
6 billion in 1999 (12 years later)	

Source: United Nations

The growth of human population is summarized in the following four periods:

(i) **Hunter-gatherer Era:** It refers to the earliest period of human history. Humans were mainly hunters and used to live in forests.

(ii) **Agricultural Era**: Humans learnt agricultural practices and cultures were evolved.

(iii) **Era of Industrial Revolution**: This era was of scientific developments and industrial advances.

(iv) **Modern Industrial Era**: Scientific and industrial revolution touched every sphere of human life: health, education, living style, etc.

Human populations in these periods are summarized in Table:

Era	***Period***	***Total population***
Hunter-gatherer Era	(From evolution—9000 BC)#	Less than 1 million
Agricultural Era	9000 BC–1600 AD	500 million (by 1600 AD)
Era of Industrial Revolution	1600 AD–1950 AD	1800 million (by 1900 AD)
Modern Industrial Era	1950 AD–till date	7 billion (by 2011 AD)

Major periods of growth of human population

BC = Before Christ, AD = Anno Domini, 1 million = 10 lakhs; 1 billion = 1000 million = 100 crores # 100,000–10,000 years ago

Population Explosion

Population explosion means extremely fast rise in the number of people.

Population of India during 1951–2001

Year	***1951***	***1961***	***1971***	***1981***	***1991***	***2001***	***2011***	***2021***
Population (Millions)	*361*	*439*	*548*	*683*	*846*	*1028*	*1210*	*1393*

Population Explosion in Indian Context India alone has about 16% of the world's population. India has a population growth rate of about 2.15%. Population growth is the reason for every environmental problem faced by Indian citizens:

(i) About one-third of the total population is poor and is subject to live below the poverty line.
(ii) About 53% of India's total land area is prone to soil erosion.
(iii) Forests have been declining.
(iv) Water and other natural resources are diminishing.
(v) Major population lacks basic amenities of living such as water, food, healthcare, etc.
(vi) Ecosystems and biodiversity is in danger.
(vii) India is facing energy crisis.
(viii) Due to upcoming shelter needs for the growing population, agricultural landis shrinking and leading to food crisis.
(ix) Population explosion has resulted in overcrowding, creation

of slums, etc.

(x) Because of unemployment, rural people are migrating to urban cities; so the government is not able to provide jobs to all.

So efforts must be done to tackle population explosion

- Minimum age of Marriage
- Family planning
- Raising the Status of Women
- Spread of Education
- Adoption
- Change in Social Outlook
- Social Security
- More employment opportunities

Population Policy

Population policy means measures instituted by a government to influence size, growth, distribution or composition of population.

The objectives of a good population policy are the following:

(i) Proper child care.

(ii) Provide universal access to family planning and reproductive health programmes and to information and education regarding these programmes.

(iii) Ensure that *men* fulfill their *responsibility* to ensure healthy pregnancies, *proper child care*, promotion of women's worth and dignity, etc.

(iv) Make women equal participants in all aspects of society—by increasing women's *education*, health and employment.

(v) *Recognize* that economic development is essential for environmental protection.

(vi) Provide information for *adolescents* (by increasing their access to education) to prevent unwanted pregnancies, unsafe abortion, and the spread of AIDS and sexually transmitted diseases.

To sum up, *a good population policy aims at striking a balance between population* (P) and resource consumption (RC) so that biodiversity (B) and ecological integrity (EI) is not lost.

Population Stabilization

Population stabilization means the attainment of zero growth, in which the number ofbirths in a population equals the number of deaths.

Population stabilization occurs when parents have enough children to replace them in population. In industrialized countries, a total fertility rate of 2.1 is considered to be a replacement-level fertility needed for population stabilization.

Population Structure

India alone has about 16% of the world's population which needs support from only 2.4% of the world's area, available in India. Population structure of a countryis given below.

S. No.	**Population characteristics**	**=Description**
1	**Population Size**	= No. of individuals
2	**Natality (birth rate)**	= No. of offsprings produced per female per unit time
3	**Mortality (death rate)**	=No. of deaths of individuals per unit time
4	**Population density**	= No. of individuals per unit area or volume
5	**Population growth rate**	=Net result of births, deaths and dispersals
6	**Total fertility rate**	=The average number of children each women has over her lifetime, expressed as a yearly rate
7	**Population profile**	*=A bar graph plotting numbers of males and females for successive ages in the population, ending with the oldest at the top*
8	**Crude Birth Rate (CBR)**	*=The number of births per thousand of the population per year, when consideration is not given to what proportion of the population is young or old, female or male*
9	**Crude Death Rate (CDR)**	*=The number of deaths per thousand of the population per*

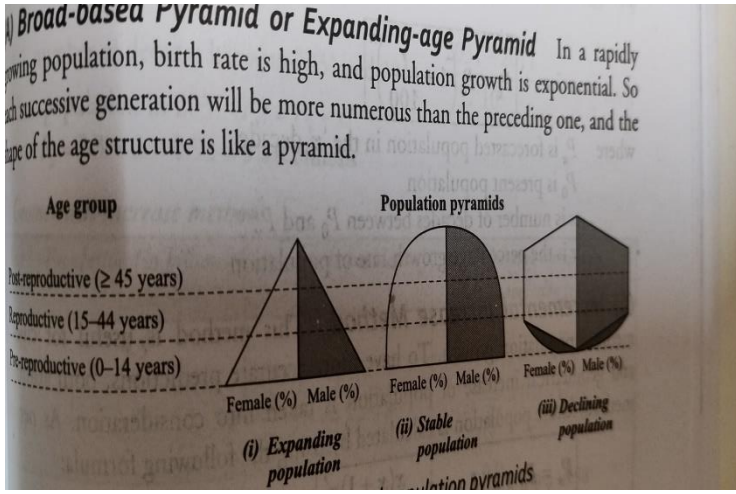
		year, when consideration is not given to what proportion of the population is young or old, female or male
10	**Doubling time**	*= The time it takes for a population to double its size when population is growing at a given growth rate*

Population Pyramids

Age distribution influences both birth and death rates. In any ecological population, there are mainly three age groups: Pre-reproductive (0–14 years), reproductive (15–44 years) and post-reproductive (45 years and above). *The proportion of different age groups in any population is generally expressed graphically in the form of population (or age) pyramids*.

There are three types of population pyramids.

Broad-based Pyramid or Expanding-age Pyramid: In a rapidly growing population, birth rate is high, and population growth is exponential. So each successive generation will be more numerous than the preceding one, and the shape of the age structure is like a pyramid.



Age distribution and population pyramids

Bell-shaped Polygon: As the rate of growth of a population slows and stabilises, the reproductive and pre-reproductive age groups become almost equal in size while the post-reproductive group is the smallest and thus a stable age pyramid or bell-shaped polygon is formed.

Urn-shaped Pyramid: *If* the birth rate is drastically reduced, the pre- reproductive group decreases in proportion to the reproductive and post-reproductive groups and thereby, an urn-shaped pyramid is formed. This type of age pyramid is also known as a *diminishing-age pyramid* and it is the representation of a population that is dying off.

FAMILY WELFARE PROGRAMMES

Family includes children, women, men, and the aged, handicapped and less privileged.

Welfare means protection from hunger, poverty, undernourishment, under development, etc.

Aims of Family Welfare Programmes

Family welfare programmes aim at improving the quality of life by providing food, shelter, education, medical and developmental assistance.

Objectives of Family Welfare Programme

The objective of the National Family Welfare Programme, launched in 1951 in India has been *to stabilize the population at a level consistent with the requirement of the national economy by reducing the birth rate to the extent necessary.*

The main objective of family Welfare Programme is **to stabilize the population and to provide qualitative health services including immunization to both pregnant mother and children**.

Problems of Family Welfare Programmes

There is no AIM with respect to the welfare of family.

A: Awareness (poor): Inadequate *awareness* about family welfare programmes, like Pulse-Polio Movement.

I: Infanticide (girl child): (ii) Due to female *infanticide*, male–female sex ratio has reached an alarming stage at the national as well as state levels.

M: Male dominance: (iii) Due to *male dominance* in society, women are generally forced to adopt means of family planning.

Family Welfare Programme Jobs, safe water supply, environmental sanitation, healthy work conditions, and smart investments in education and healthcare are extremely effective in improving welfare of families. A focused approach in this direction will improve productivity

and economic growth.

ENVIRONMENT AND HUMAN HEALTH

Resource depletion, waste generation, disturbance of ecosystems, consumerism, discharge of air or water pollutants, etc., are some of the human activities which have continuously been changing our environment. As a result of this, human health has been adversely affected.

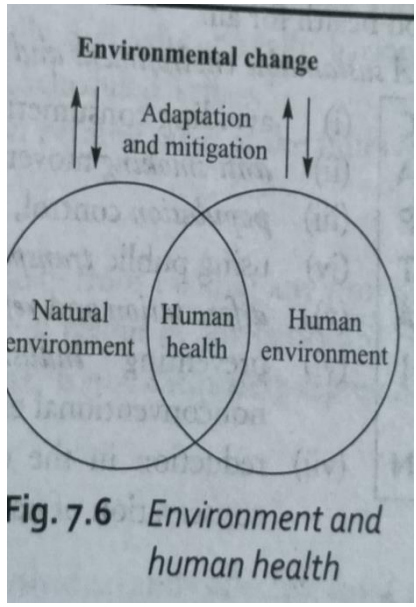


Fig. 7.6 *Environment and human health*

The following facts are indicators which support that health is an outcome of the interactions of humans with their environment:

- *Due to exposure to the air pollutants released by industries, motor vehicles, smoking etc. humans suffer from respiratory diseases such as tuberculosis and lung cancer.*
- *Due to consumption of impure water*, cholera, typhoid, diarrhoea, dysentery, etc., are caused.
- *Due to contamination of water* through harmful pesticides, cancer, infertility and neurological diseases are caused.
- *Due to scarcity of water and consequent unhygienic conditions*, tuberculosis, tetanus and *leprosy are caused.*
- *Due to stagnant water*, mosquitoes breed and spread malaria.
- *Due to high-rise buildings*, visual pollution and mental strain is caused.
- *Due to untreated human excreta*, several kinds of virus and bacteria grow which give rise to diseases like cholera, typhoid, jaundice, diarrhoea, etc.
- *By direct contact with blood of infected persons or by exchange of body fluids during sexual contact*, Acquired Immune Deficiency Syndrome (AIDS) is caused.
- *By consuming arsenic-contaminated water for more than 5 years*, humans develop colour change on the skin, cancer of skin,

bladder, kidney, lungsand legs.

- *Deforestation* has resulted in biodiversity loss and depleted flora and fauna. Thus, the sources of large number of medicines which are essential for maintaining human health are badly affected.

We must work for a sustainable environment, which ultimately will result in good health for all.

A sustainable environment and good health is achieved through

C (i) avoiding consumerism,
A (ii) *anti-smoking* movements and campaigns,

P (iii) *population* control,

T (iv) using public *transport*, controlling transport emissions,
A (v) *afforestation* and *reforestation,*

I (vi) preventing *industrial* pollution, preferred use of *renewable nonconventional* energy instead of thermal power generation, and

N (vii) reduction in the consumption of *natural resources*, protection andconservation of natural resources.

ENVIRONMENT AND HUMAN HEALTH

1. Physical Hazards – Radioactive and UV radiations, Global warming, Chlorofluro carbons, Noise etc.
2. Chemical Hazards – Combustion of Fossil fuels, industrial effluence, pesticides, heavy metals,
3. Biological Hazards- Bacteria, Viruses, Parasites

HIV/AIDS

HIV stands for Human Immunodeficiency Virus. Under normal circumstances, CD_4 cells (or CD_4 helper lymphocyte cells: a type of defence cells in the body) help the immune system to function normally and fight off certain kinds of infections by acting as messengers to other immune-system cells telling them to become active and fight against an invading germ.

A person infected with HIV is referred to as an HIV positive person. In them, the HIV attaches to these CD_4 defence cells, infects them and uses them to multiply resulting in loss of ability of

CD_4 cells to do their job of fighting infections. As the immune system becomes weak, such people are unable to fight off many infections, particularly cancers, pneumonia, tuberculosis, meningitis, etc. The name for this condition is *Acquired Immuno Deficiency Syndrome (AIDS)*. In the absence of an immune system, a minor disease may be fatal.

AIDS is one of the most destructive epidemics in recorded history. The Joint United Nations Programme on HIV/AIDS and the World Health Organization estimated that AIDS has killed more than 40 million people as of January 2023 since it was first recognized on December 1, 1981.

(A) Transmission of HIV The most common ways for the transmission of HIV from one person to another are described below:

(i) From an infected *mother* to her baby before birth, during birth and after birth. Breast milk can also transmit HIV infection to the infant.
(ii) HIV is mostly transmitted through semen and vaginal fluids during *unprotected* sex.
(iii) Sharing of *syringes* and needles among intravenous drug users can transmit HIV from an infected person to a normal person. Some nurses/doctors have become infected after being stuck with needles containing HIV infected blood or through splashes inside his or her nose or into their eyes.
(iv) *By transfusion of blood having HIV*, the virus can be transmitted to healthy persons.

It is very difficult to stop the spread of HIV in India because of poverty, illiteracy and poor health.

(B) Symptoms of AIDS In a person infected with AIDS, symptoms can include

(i) Sweating at night
(ii) Swollen lymph glands
(iii) White spots in the mouth or throat
(iv) Loss of memory
(i) Consistent cough
(ii) Rapid weight loss
(iii) Extreme weakness or fatigue
(iv) Frequent long fevers
(v) Chronic diarrhoea that lasts for more than a week
(vi) Minor infections that cause skin rashes and sores in the mouth, annus or genitals

(vii) Pneumonia
(viii) Depression and other neurological disorders

It should be remembered that each or any of the above symptoms can be related to other illnesses. A test for HIV infection is the only way to certainly find out whether a person has AIDS or not.

(C) Prevention of AIDS To ensure an HIV/AIDS free society, the following awareness and proactive actions need to be implemented:

(i) Having a *faithful monogamous sexual relationship* with an uninfected partner
(ii) Spreading *awareness*, proper medical care for HIV positive pregnant women can prevent HIV infection to the newborn.
(iii) Use of *condoms* (safe sex)
(iv) Transfusion of unaffected blood ensured by proper *test* for HIV freeness.
(v) Use of *sterilized dispensable syringes*

(D) ***Social and Economic Impacts of AIDS*** Impacts of AIDS are briefly summarized below:

(i) Millions of young people are *dying* every year due to AIDS. Increased mortality of earning members results in loss of family income.
(ii) *Expenditures* on treating the sick, caring for AIDS orphans, training to replace sick workers keeps on growing.
(iii) Victims of AIDS, who are still alive are unable to work. They require special medical care. Newly trained workers have little knowledge and work experience so the productivity reduces, increasing pressure for the state's *finances*.
(iv) Many *orphans* are left behind.
(v) The *resources* available for public expenditures (such as education) reduce.
(vi) Slower growth of *economy* is the result.
(vii) *Social unrest* in the society is the outcome.
(viii) *Taxable population* reduces as a result of mortalities, due to AIDS.

ROLE OF INFORMATION TECHNOLOGY IN ENVIRONMENT AND HUMAN HEALTH

Applications of IT in the Environment

Some of the important applications of IT in the field of environment and ecology are listed below:

(i) *Weather forecasting* through Geographical Information System (GIS) for agricultural production, water resource management, etc.

(ii) *Exploring* the possible availability of crude oils, gold mines, metal ores, geothermal power sources, etc., using Remote Sensing Information System (RSIS). Optimum selection of sites for railways or industry, etc. Biodiversity conservation by mapping and monitoring various natural resources—*flora and fauna*.

(iii) *Disaster management* in calamity-hit areas by extracting information. Monitoring of environmental pollution through remote sensing.

(iv) Simulation of environmental scenarios for analysis, prediction, decision making and development activities. Collaboration, communication and coordination among environmental scientists for decision making.

Applications of IT in Human Health

Some of the applications in which IT is playing an important role for better human health are listed below:

(v) Information on *health*, epidemics and their prevention is maintained on *web sites* of the World Health Organization.

(vi) Through electronic media; dengue fever, bird flu and other epidemics are brought to the *attention* of people.

(vii) *Dates of immunisation and sanitation programmes* are transmitted to public using television, computers, satellite communication, etc. Bioinformatics is used in the Human Genome Project (HGP) to create a map of the entire set of genes (genome) in the human cell by decoding the three billion units of human DNA.

(viii) Help and expert opinion can be obtained from expert *doctors* of any part of the world through telemedicine.

(ix) *Health training* is imparted using satellite communication system.

REMOTE SENSING & GIS

Employing geographic information systems (GIS) and remote sensing (RS) techniques is a very important issue these days as they aid planners and decision makers to make effective and correct decisions and designs.

-They allow the engineer to continuously monitor any change any intended plans to secure their success or rectification to meet the requirements.

-It supplies the needed geo database to build informative and rich GIS. The role of GIS is in storing, managing a great deal of data about the images and all the related attributes to allow their manipulation, analysis and finally presentation according to choice.

-The remote sensing data are using for the following

- • Deforestation (rainforest, mangrove colonies)
- • Species inventory
- • Watershed protection (riparian strips)
- • Coastal protection (mangrove forests)
- • Forest health and vigor.

-The use of remote sensing technology in geological resource management is

- Surficial deposit/ bedrock mapping
- Litho logical mapping
- Structural mapping
- Sand and gravel exploration
- Mineral exploration
- Hydrocarbon exploration
- Environmental geology
- Baseline infrastructure
- Sedimentation mapping and monitoring
- Event mapping and monitoring
- Geo-hazard mapping
- Planetary mapping

-New technique which integrates satellite remote sensing and Geographical Information System (GIS) can be used to continually monitor air quality at micro-scale level.

Images from Land sat data are used to determine two air pollutant parameters, i.e. Carbon Monoxide (CO) and Particulate Maters

-The high resolution data of TM, SPOT, and IRS permit more accurate of water quality mapping.

Developed regression models to represents best relationships between salinity, turbidity, total suspended solids and chlorophyll concentrations and the corresponding mean radiance values from LANDSAT

-The CIR sensors are used for pollution control related to agriculture, forestry, mining, and land development activities.

The most widely used water balance technique for operational use is crop specific drought index.

VALUE EDUCATION

Value

Value means 'the ultimate worth' of an action or a thing. For example, the nonviolence movements of Mahatma Gandhi were of high value.

However, the misuse of power, killing of millions of persons and other such actions of Hitler, leading to World War II have no value or have a negative value.

Thus, *values are one's own beliefs, feelings, perceptions, principles and behavior to judge what is right or wrong.*

Value Education

Value education is defined as *the education that develops moral, spiritual and cultural sense; and makes one able to take right judgments in one's own life*.

In the context of the environment, value education teaches us values for nature, culture, social justice, human heritage, equitable use of resources, and sharing common natural resources.

It also teaches us to avoid consumerism, wastefulness and overexploitation of nonrenewable natural resources.

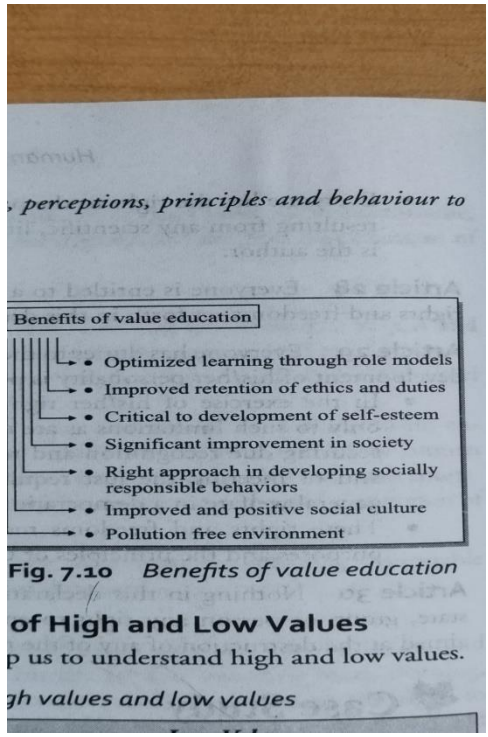


Fig. 7.10 *Benefits of value education*

of High and Low Values

p us to understand high and low values.

gh values and low values

Objectives

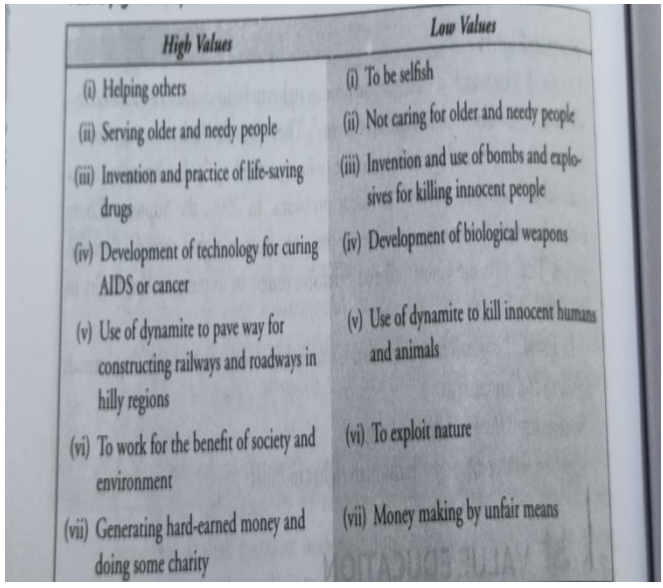
1. To improve the integral growth of human beign
2. To create attitudes and improvement towards sustainable lifestyle.
3. To increase awareness about our national history our cultural heritage, constitutional rights,
national integration, community develo9pment and environment.
4. To create and develop awareness about the values and their significance and role
5. To know about various living and non- living organisms and their interaction with environment.

Types of values:

1. Universal values
2. Cultural values
3. Individual values
4. Global values
5. Spiritual values

Illustrations and Examples of High and Low Values

The following examples and illustrations help us to understand high and low values.



High Values	Low Values
(i) Helping others	(i) To be selfish
(ii) Serving older and needy people	(ii) Not caring for older and needy people
(iii) Invention and practice of life-saving drugs	(iii) Invention and use of bombs and explosives for killing innocent people
(iv) Development of technology for curing AIDS or cancer	(iv) Development of biological weapons
(v) Use of dynamite to pave way for constructing railways and roadways in hilly regions	(v) Use of dynamite to kill innocent humans and animals
(vi) To work for the benefit of society and environment	(vi) To exploit nature
(vii) Generating hard-earned money and doing some charity	(vii) Money making by unfair means

Goals and Functions of the National Resource Centre on Value Education (NRCVE)

The goals and functions of NRCVE are

(i) To develop educational materials and other *teaching aids*, to document and disseminate information
(ii) To design strategies for *effective* implementation
(iii) To develop plans, *activities* and programmes for value orientation of school education
(i) To provide extension and *consultancy* services
(ii) To serve as a treasure *house* for any help

Case Study

Value Education

Seeing the acts of environmental degradation committed by humans all around us, we are left to wonder if most humans have forgotten their responsibility to-wards the environment.

Children learn best through the good manner exhibited by their parents/ teachers and through their ethically correct conduct. Most people are unknowingly harming the environment. A lot of difference can be made by talking to these young people who are looking for guidance and love.

Environmentally friendly behaviour will automatically develop in the society by teaching core values like honesty, trust, respect, integrity, commitment, open minded, individuality and equality to the youth.

ENVIRONMENTAL EDUCATION

Community based environmental education helps in building knowledge and skills. It also helps in building an infrastructure for change that is sustainable, equitable and empowering. Community based environmental education is capable of protecting health and habitat from the various problems existing in the world.

Challenges

In India, the development and environmental protection challenges are enormous due to the following reasons:

(i) **Poverty:** It is a big challenge in reaching out to large population cost-effectively because financial sources are very limited.

(ii) **Increasing Population:** India's annual population increase is equal to the population of Australia.

(iii) **Less Land**: With about 16% of the world population and a little over 2% of its land, there is already enormous pressure on our resources.

(iv) **Low Literacy Levels**: The environmental educators face many challenges to spread awareness regarding conservation and environmental management.

(v) **Low Awareness**: Poor Indian citizens have low or no awareness about importance of environment.

(vi) **Less Resources and Corruption:** Putting environmental education on the agenda of educational decision makers and policy makers is also a big challenge primarily because of less resources and more corruption.

(vii) **No Applicability of Global Solutions:** The environmental educators face difficulties in meeting the objectives of effective and local specific environmental education because environmental conditions and environmental concerns vary from one region of the state to another.

Environmental Education and Its Focuses

Environmental education refers to organized efforts to teach how natural environments function and how people can manage their behavior and ecosystems in order to live sustainably.

Environmental education focuses on efforts to make the world a heaven like Kashmir is in India:

(i) Increasing people's awareness and knowledge about the environment and environmental challenges
(ii) Developing necessary skills and expertise to address the challenges
(iii) Fostering attitudes, motivations, and commitments to make informed decisions and take responsible action for solving environment-related problems

Role of Environmental Education for Environment Protection

Environmental education is a process of recognizing values and clarifying concepts in order to develop skills and added tools necessary to understand and appreciate the inter-relationship among humans, their culture and their biophysical surrounding. It is through this process of education that people can be sensitized about environmental issues. Awareness and understanding of environmental issues help in practicing right actions needed for development that meets the needs of the present without compromising the ability of future generations to meet their own needs. These concepts are illustrated in Fig.

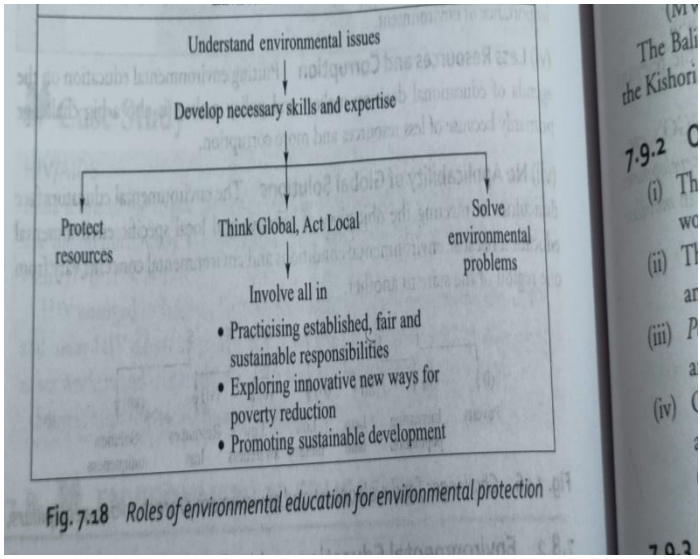


Fig. 7.18 *Roles of environmental education for environmental protection*

Roles of Women in Environment Protection

(i) An educated woman can easily *motivate* other women (who are generally shy).

(ii) She can conduct different *campaigns* (health care, environment protection, etc.) for local people located in the rural and urban areas. Education will enhance *awareness* for the preservation of natural resources.

(iii) She can raise the *interest* of her family members towards education.

(iv) Only she can *discuss* sensitive issues like family planning and the relevant precautionary and preventive measures needed.

(v) She is capable of attracting the attention of media, government, NGO's, etc., regarding initiation of developmental activities for *sustainable development* (e.g. proper waste disposal, cleanliness, tree plantation, etc.). She can *mobilise funds* through voluntary donations for social activities.

Women and Child Welfare

About women and child development department

The major thrust of the programme of the department of women and child development is to ensure the all-round development of children and empowerment of women. The strategy adopted for the programmes in the areas of women's development involves empowerment of women through awareness generation, education

and greater emphasis on skill development and income generating activities so as to enable women to enhance their earning capacity and status in life.

Again to ensure that children get protection against neglect, abuse and exploitation, the department has taken up programmes and schemes to guarantee their basic rights including survival, protection, development and full participation in social, cultural, educational and other endeavour for their individual growth and well-being. The emphasis has been on improving the delivery of services to the children and also to achieve convergence of services available for women and children.

The necessity of women and child care is due to the following reasons:

- Women carry out a greater part of the household work and toil for longer hours.
- Women are exposed to dangerous levels of indoor pollution from burning of biomass fuel.
- Women are more influenced by environmental degradation than men.
- Women have special problems with regard to water supply and sanitation.
- Children are more vulnerable toward environmental impacts and child labours are exposed to hazardous occupations.

Considering the above facts, the objective of women and child welfare is:

- To improve the social, economical, health and nutritional status of women.
- To improve the physical, mental, intellectual, and nutritional status of children.
- To safeguard the constitutional rights of women and children.
- To create awareness regarding different women and child development programmes amongst the rural peoples.

Women Empowerment Schemes

1. Beti Bachao Beti Padhao Scheme
2. One Stop Centre Scheme
3. Women Helpline Scheme
4. UJJAWALA : A Comprehensive Scheme for Prevention of trafficking and Rescue, Rehabilitation and Re-integration of Victims of Trafficking and Commercial Sexual Exploitation
5. Sakhi Niwas
6. Ministry approves new projects under Ujjawala Scheme and continues existing projects

7. SWADHAR Greh (A Scheme for Women in Difficult Circumstances)
8. NARI SHAKTI PURASKAR
9. Awardees of Stree Shakti Puruskar, 2014 & Awardees of Nari Shakti Puruskar
10. Mahila police Volunteers
11. Mahila Shakti Kendras (MSK)
12. NIRBHAYA

What Is Child Welfare?

Child welfare, services and institutions concerned with the physical, social, and psychological well-being of children, particularly children suffering from the effects of poverty or lacking normal parental care and supervision.

Chula smoke

Chula smoke is the third highest cause of disease and death after dirty water and lack sanitation. Over half the diseases and premature death could be avoided in India by providing access to clean water, sanitation, food and well ventilated homes.

HUMAN RIGHTS

Human rights are the rights a person has which he or she must enjoy on this earth because he or she is a human being.

Human rights are rights that all people have, regardless of their gender, nationality, residence, sex, ethnicity, religion, colour or other classification. As a result, human rights are non-discriminatory indicating that everyone is guaranteed to them and cannot be denied them.

Human rights law obliges governments to do some things, and prevents them from doing others. Individuals also have

responsibilities: in using their human rights, they must respect the rights of others. No government, group or individual person has the right to do anything that violates another's rights.

The 'Human Rights' approved by the UNO are:

- All Human beings are born free with dignity to live without any discrimination.
- No human being can appoint another human being as a slave.
- No one can be subjected to inhuman punishment and torture.
- No one has the liberty to arrest, imprison and deport another person.

- Every individual has a right to have his opinion and freedom of expression.
- All human beings have the right to have rationality, consciousness and religious freedom.
- One has the right to change his religion.
- All have the right to meet peacefully and create associations.
- All human being have the Right to Employment.

HUMAN RIGHTS AND ENVIONMENT

A clean, healthy and sustainable environment is essential in the enjoyment of our human rights. On 28 July 2022, the United Nations General Assembly declared that everyone on the planet has a right to a healthy environment.

All human beings depend on the environment in which we live. A safe, clean, healthy and sustainable environment is integral to the full enjoyment of a wide range of human rights, including the rights to life, health, food, water and sanitation. Without a healthy environment, we are unable to fulfill our aspirations or even live with minimum standards of human dignity. At the same time, protecting human rights helps to protect the environment. When people are able to learn about, and participate in, the decisions that affect them, they can help to ensure that those decisions respect their need for a sustainable environment.

Melting ice, rising sea levels, and changing weather patterns attributable to climate change increasingly affect daily life for millions and perhaps billions of people. When the environment suffers, people suffer. Climate change increasingly interferes with the realization of fundamental, intentionally recognized human rights-including the right to life to health, to culture, to food, to self-determination, to property and to development. The poorest and most vulnerable will suffer first and perhaps most but ultimately the crisis will reach all of us.