

Community Development



LEARNING OBJECTIVES

This chapter will enlighten students about

- Understanding the need for Rain water harvesting and learn the different methods of rain water harvesting
- Understanding the need for safe drinking water
- Learning the different methods of water purification
- Creating, awareness on waste management
- Importance of Organic food and Organic farming
- Gaining knowledge on the use of medicinal plants to cure common ailments
- Understanding the various income generating schemes by government
- To bringing awareness about the rights of a girl child



8.1 Introduction

Community development is a professional discipline that brings sustainable development, provides economic opportunity, rights, equality and social justice, promotes education and empowerment of people with their skills within their communities, creates identity or interest in urban and rural settings”.

The United Nations defines **community development** as “a process where community members come together to take collective action and generate solutions to common problems. Community development practitioners work along side people in communities to help build relationships with people to identify common concerns.



The Community Development Programmes are based on the following principles:

1. Planning programmes and developmental activities by involving the people to fulfill the various needs of the community.
2. Bringing psychological betterment of the individual.
3. Creating the local leadership and developing socialism.
4. Creating awareness about national policies and political setup in democracy.

5. Setting up of cooperative societies for carrying developmental works.

The Community Development programme is focused on selected areas such as rain water harvesting, water safety, waste management, organic food and organic farming, use of medicinal plants to cure common ailments, protecting the rights of a girl child and various Income generating schemes.

8.2 Rain Water Harvesting

Water is a precious natural resource that needs to be managed and used wisely. Rainwater has nearly neutral pH, and is free from disinfection by products, salts, minerals and other natural, manmade contaminants. The time, duration and the amount of rainfall varies from place to place. With rising population the demand for water is increasing day by day. Modern lifestyle demands more amount of water. This leads to shortage of water in many parts of the country. Hence water must be conserved for future use. One method of conserving water is to collect rainwater and store it for later use. This is called rain water harvesting.





Rainwater harvesting is gathering, or accumulating and storing of rainwater. It has been used to provide drinking water, water for livestock, water for irrigation. Rain water collected from the roofs of houses, tents and local institutions or from specially prepared areas of ground makes an important contribution to drinking water. Roof rainwater is usually of good quality and does not require treatment before consumption.

8.2.1 Benefits of Rainwater Harvesting

- Rainwater supplements our domestic, industrial and other water needs.
- Ground water is constantly getting depleted or polluted in large areas.

- Water is free, only cost is for collection and use.
- Rain water is sodium free and is therefore important for persons on low sodium diets.
- Rain water is superior for landscape irrigation.
- Rain water harvesting reduces consumer's utility bills.

8.2.2 Methods of Rainwater Harvesting

Broadly there are two ways of harvesting rainwater.

1. Surface runoff harvesting

In urban area rainwater flows away as surface runoff. This runoff could be caught and used for recharging aquifers by adopting appropriate methods.





2. Rooftop rainwater harvesting

It is a system of catching rainwater where it falls. In rooftop harvesting, the roof becomes the catchments, and the rainwater is collected from the roof of the house/building. It can either be stored in a tank or diverted to artificial recharge system. This method is less expensive and very effective and if implemented properly helps in augmenting the groundwater level of the area.

Components of the Rooftop Rainwater Harvesting

The system mainly constitutes of following sub components:

Catchments

Transportation

First flush

Filter

Catchments

The surface that receives rainfall directly is the catchment of rainwater harvesting system. It may be terrace, courtyard, or paved or unpaved open ground.

Transportation

Rainwater from rooftop should be carried through down take water pipes or drains to storage/harvesting system. Water pipes should be UV resistant (ISI HDPE/PVC pipes) of required capacity. Water from sloping roofs could be caught through gutters and down take pipe. At terraces, mouth of the each drain should have wire mesh to restrict floating material.

First Flush

First flush is a device used to flush off the water received in first shower. The first

shower of rains needs to be flushed-off to avoid contaminating storable/rechargeable water by the probable contaminants of the atmosphere and the catchment roof. It will also help in cleaning of silt and other material deposited on roof during dry seasons. Provisions of first rain separator should be made at outlet of each drainpipe.

Filter

Filters are used for treatment of water to effectively remove turbidity, colour and microorganisms. After first flushing of rainfall, water should pass through filters. A gravel, sand and 'netlon' mesh filter is designed and placed on top of the storage tank. This filter is very important in keeping the rainwater in the storage tank clean. It removes silt, dust, leaves and other organic matter from entering the storage tank. The filter media should be cleaned daily after every rainfall event.

INTERESTING FACT

Roof top rainwater is the most common practice in Shillong, Meghalaya. Eventhough Cherapunjee and Mawsynram situated at a distance of 55 km. from Shillong, receive heavy rainfall The state capital Shillong, faces acute shortage of water. Hence every household in the Shillong city has a roof top water harvesting structure.

Why water has to be purified?

If water is contaminated many diseases such as Hepatitis, Cholera, Diarrhoea, Typhoid fever, Dysentery, Amoebic dysentery results. Hence water has to be purified for consumption.

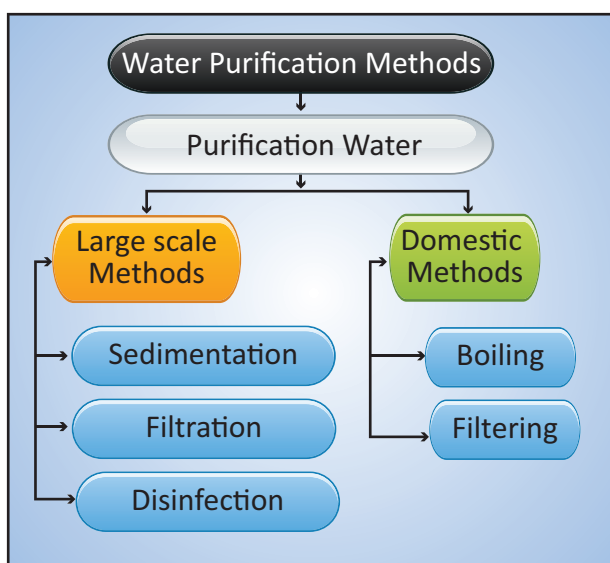
8.3 Water Safety

Safe drinking water is most important for consumption. It is necessary to protect drinking water from contamination for public health, economic and environmental reasons.

8.3.1 Importance of Safe Drinking Water

Safe drinking water is the basic necessity of a community. The availability and quality of water determines the quality of life. Thus water is a finite resource that has limits and boundaries to its availability and suitability for use.

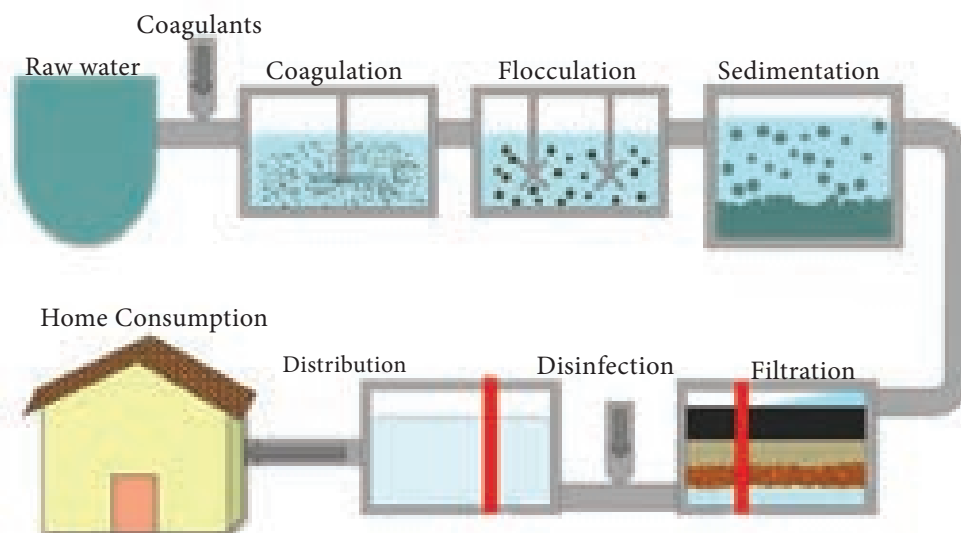
Water purification methods help to ensure availability of safe drinking water. **Water purification** is the process of removing undesirable chemicals, biological contaminants, suspended solids and gases from water. Purifying water may reduce the concentration of particular matter including suspended particles, parasites, bacteria, algae, viruses, fungi, as well as reducing the concentration of a range of dissolved and particular matter.



8.3.2 Water Purification Methods

Industrial Methods (Large Scale Methods)

- 1. Sedimentation:** Water taken from deep borewells and similar underground sources may be almost free from suspended impurities. But river, tank and lake waters carry a large amount of suspended matter, causing the water to be turbid and coloured. Storage in reservoirs makes these impurities settle to the bottom. The settlement and removal of impurities is effective by adding chemical agents to the water such as alum. The chemical hydrolysis in water forms flaky, flocculent precipitates in which the suspended particles including a large number of bacteria are trapped and carried to the bottom by sedimentation.
- 2. Filtration:** Sedimentation may not remove all suspended impurities in water. Therefore water is further purified by filtration. For the filtration of water for human consumption two types of filters are used. They are Slow Sand Filters and Rapid Sand Filters used in industries.
- 3. Disinfection:** The filtered water is disinfected. The most common disinfectant used is chlorine. Chlorine is a strong oxidant that rapidly kills many harmful micro-organisms. Other possible pathogens include viruses, bacteria, including *Salmonella*, *Cholera*, *Campylobacter* and *Shigella*. Chlorine is added to water in the form of solution of chlorine gas drawn from steel



Water Purification Process

cylinders of liquid chlorine or in the form of bleaching powder.



22nd March is celebrated as world water day. The theme for 2018 world water day is Nature for water. The theme focuses on the importance of water.

Domestic Methods

1. Boiling

Boiling water is the cheapest and safest method of water purification. In this method, clean water should be brought to boil and left at rolling-boil for 1-3 minutes. For people living in high altitude areas, boil water for longer than

water boiled at lower altitudes. This is because water boils at lower temperatures in higher altitudes. Boiled water should be covered and left to cool before drinking. Boiling kills bacteria, parasites and viruses.

2. Use of filters

In household water is purified by muslin cloth and by reverse osmosis. Reverse osmosis is a water treatment process that remove contaminants from water by using pressure to force water molecules through a semipermeable membrane. The water is filtered leaving clean drinking water.



Chlorine levels up to 4 milligrams per litre (4 parts per million) are considered safe in drinking water



8.4 Waste Disposal

Proper waste disposal is essential for community development if waste is not disposed properly it will affect the community leading to various problems.



Waste management or waste disposal are all the activities and actions required to manage waste from its inception to its final disposal. This includes amongst other things collection, transport, treatment and disposal of waste together with monitoring and regulation.

Waste can take any form that is solid, liquid, or gas and each have different methods of disposal and management. Waste management normally deals with all types of waste whether it was created in forms that are industrial, biological, household, and special cases where it may pose a threat to human health. It is produced due to human activity such as when factories extract and process raw materials. Waste management is intended to reduce adverse effects of waste on health, the environment or aesthetics.



Disposal methods

Land fills

Throwing daily waste/ garbage in the landfills is the most popularly used method of waste disposal used today. This process of waste disposal involves burying the waste in the land.

This method causes numerous contamination problems. Landfills give rise to air and water pollution which severely affects the environment and can prove fatal to the lives of humans and animals.



Incineration/ Combustion

Incineration or combustion is a type of disposal method in which municipal solid wastes are burned at high temperatures so as to convert them into residue and gaseous products. The biggest advantage of this type of method is that it can reduce the volume of solid waste to 20 to 30 percent of the original volume, decreases the space they take up and reduce the stress on landfills.

This process is also known as thermal treatment where solid waste materials are converted by incinerators into heat, gas, steam and ash.

Composting

Composting is a easy and natural bio-degradation process that takes organic wastes i.e. remains of plants and garden and kitchen waste and turns into nutrient rich food for your plants. Composting, normally used for organic farming, occurs by allowing organic materials to sit in one place for months until microbes



decompose it. Composting is one of the best method of waste disposal as it can turn unsafe organic products into safe compost. On the other side, it is a slow process and takes lot of space.

Vermicomposting

Vermicasting, also called vermicomposting, is the processing of organic wastes through earthworms (Figure 1). It is a natural, odourless, aerobic process, much different from traditional composting. Earthworms ingest waste then excrete casts – dark, odourless, nutrient- and organically rich, soil mud granules that make an excellent soil conditioner. Earthworm casts are a ready-to-use fertilizer that can be used at a higher rate of application than compost, since nutrients are released at rates that growing plants prefer.



Vermicasting can be done on a small scale by homeowners with household organic wastes, on a large-scale by farmers with manure or by the food industry using organic wastes such as fruit and vegetable cull materials. Through proper design, vermicasting is a method of waste handling that:

- is clean, socially acceptable, with little to no odour.
- requires no energy input for aeration.
- reduces the mass of waste by 30%.

- produces a valuable vermicast byproduct.
- even generates worms as fishing bait.



Recovery and Recycling

Recycling is the process of converting waste products into new products to prevent energy usage and consumption of fresh raw materials. Material for recycling may be collected separately from general waste using bins and collection vehicles, a procedure called kerbside collection. In some communities, the owner of the waste is required to separate the materials into different bins (e.g. for paper, plastics, metals) prior to its collection. In other communities, all recyclable materials are placed in a single bin for collection, and the sorting is handled later at a central facility. The latter method is known as “single-stream recycling.”

The most common products recycled include aluminium such as beverage cans, copper such as wire, steel from food and aerosol cans, old steel furnishings or equipment, rubber tyres, polyethylene and

PET bottles, glass bottles and jars, paperboard cartons, newspapers, magazines and light paper, and corrugated fiberboard boxes.



Recycling is the third component of Reduce, Reuse and Recycle waste hierarchy. The advantages of recycling are to reduce energy usage, reduce volume of landfills, reduce air and water pollution, reduce greenhouse gas emissions and preserve natural resources for future use.

Recycling is very important as waste has a huge negative impact on the natural environment.

- Harmful chemicals and greenhouse gas are released from rubbish in landfill sites. Recycling helps to reduce the pollution caused by waste.
- Habitat destruction and global warming are some the affects caused by deforestation. Recycling reduces the need for raw materials so that the rainforests can be preserved.
- Huge amounts of energy are used when making products from raw materials. Recycling requires much less energy and therefore helps to preserve natural resources.

8.5 Organic Food and Organic Farming

Consumers are aware of the relationship between nutrition and health. Concerns over food safety and quality have fuelled the growing popularity of organic foods, and many people believe that eating organic is best for their health and well being.



Organic food is food produce which has been grown on farms using environment-friendly practices and is free of artificial fertilizers, chemical insecticides and pesticides. Organic food does not include any form of genetically modified crop.

The advantages of an organic diet in enhancing health of individual and subsequently overall development of community is given below.

- The environment benefits because natural habitats are less threatened.
- The soil is in better condition because of the manure used.
- Biodiversity increases with use of fewer chemicals which harm bees and other insects.
- Crop diversity can be ensured.
- Organic food is more nutritious as several recent studies have suggested



that such food contains higher amounts of essential nutrients and minerals, including vitamin C, iron, and zinc.

- Organic food has no chemical additives whereas conventional farming methods expose foods to chemicals in the form of pesticides, fertilisers, and preservatives. These conventional methods greatly improve productivity but they are very harmful to human beings and can cause irreversible damage.
- Organic food lacks artificial hormones and antibiotics. To maximise productivity, some modern farms inject their livestock with hormones and antibiotics which enter the human body when products like meat, milk, and eggs, are consumed. These chemicals, which are proven to cause hormonal imbalances and drug resistant bacteria in human beings.
- Organic food has increased antioxidants which help in preventing cancer and boosts mental health of children.



An organic diet decreases the chances for depression and concentration problems in children (and adults) thereby enhancing their mental health. This means the child will perform better in school, will not feel tired and will work harder than others. In addition, eating organic foods can help with attention deficit disorder (ADD), a common condition among children.



8.6 Kitchen/Terrace Gardening

Landscape gardening is an art of laying out grounds in a way which is ornamental imitating natural scenery. Such gardening is difficult nowadays, due to limited space and increased population. Kitchen/ terrace gardening is a new option available. Kitchen/ terrace gardening is growing of greens, fruits and vegetables at the backyard or terrace of the house by using kitchen waste water. Even balconies can be used for this garden. Old buckets, unused bottles, jars can be used for growing plants. Neem oil and Neem seed kernel extract can be used to protect the plants from weeds.

The advantages of Kitchen/ terrace gardening are given below:

- Fresh fruits and vegetables high in nutritive value.
- Fruits and vegetables free from toxic chemicals.
- Help to save expenditure on purchase of vegetables.
- Vegetables harvested from home garden taste better.
- Effective utilization of kitchen waste water and kitchen waste materials.



Plants suitable for Kitchen/RTerrace garden

Vegetables		Medicinal Plants		Flowers	Fruits	Spices
Tomato	Bottle gourd	Aloe vera	Pirandai	Rose	Guava	Turmeric
Brinjal	Amaranthus	Vasambu	Thoothuvelai	Jasmine	Papaya	Coriander
Chilly	Moringa	Vallarai	Ponnanganni	Hibiscus	Lemon	Fenugreek
Onion	Curry leaf	Mint	Poduthalai	Alari (Nerium)	Amla	Ginger
Big Onion	Spinach	Basil	Manathakali		Pome granate	
Lady's finger	Cowpea	Thulsi	Vettiver		Sapota	
Bitter gourd	Cluster bean	Omavalli	Kandanth thippili			
Snake gourd	Beetroot	Karisilanganni	Thippili			
Ribbed gourd	Radish	Keela nelli				

8.7 Medicinal Plants

Plants have traditionally been used as a source of medicine in India for the control of various ailments afflicting human and domestic animals thereby improving the health status and economic development of the community. Medicinal plants are used for therapeutic properties.



Medicinal value of Plants



1. ALOE VERA (Chirukattali):

Used for skin diseases, anthelmintic. Leaf extracts inhibits the growth of mycobacterium tuberculosis. The pulp of leaves is given in fever and liver enlargement.



2. CORIANDER LEAVES

Acts as a tonic for stomach and heart.
Used for treating urinary tract infection.



3. CURRY LEAVES

It has antioxidants which helps in losing weight, sharpens memory, relieve morning sickness, nausea, good for hair growth and eyesight.



4. MINT LEAVES

Contains antioxidant and anti-inflammatory agent. Used as mouth freshener.



5. ASAFOETIDA

Used as a spice. It is used to relieve spasms, indigestion, flatulence, colic, cholera and whooping cough.



6. FENUGREEK LEAVES

Controls cough and flatulence. Helps to cure ulcers and regulates Diabetes.



7. TULSI

Promotes hunger, well known immunity booster.



8. NILA VEMBU

Bitter, given in fever, malarial fever, diarrhoea and weakness. Useful for reducing blood sugar.



9. GARLIC

It reduces blood pressure and cholesterol thereby reducing risk of heart diseases, relieves stress fatigue and has anti-inflammatory property.





10. GINGER

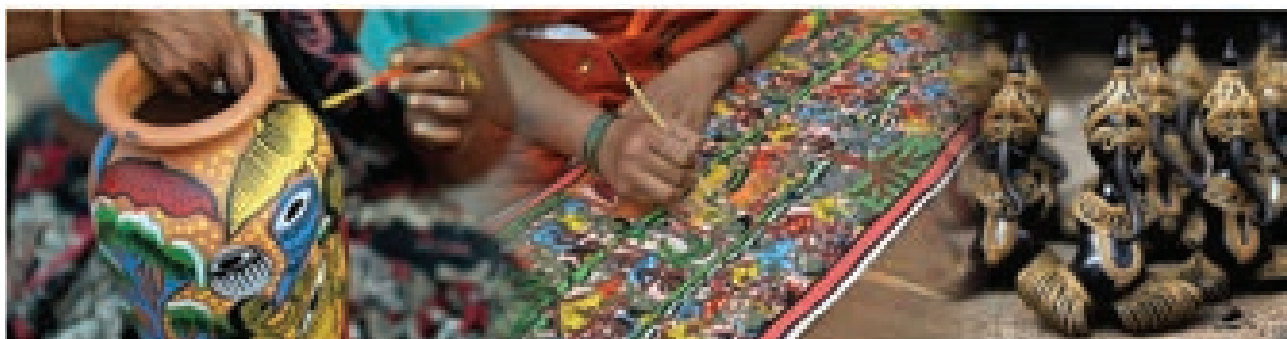
It contains gingerol a substance with powerful medicinal properties, it treats nausea and morning sickness, reduces muscle pain and soreness.

8.8 Income Generating Schemes

Income-Generating Programmes are those types of vocational continuing education **programmes** which help participants acquire or upgrade vocational skills and which enable them to conduct **income generating** activities.

The main purpose of Income-Generating Programmes is

- Vocational skills, knowledge, attitudes and values are developed to promote a better quality of life of all people.
- To upgrade work ethics so that people become useful and productive members of society.
- To alleviate poverty and to contribute to the development of human resources.
- To identify their economic needs and explore ways and means of fulfilling those needs
- By developing self-confidence and ability to undertake income generating activities through appropriate and adequate training and motivation;
- By providing opportunities for continuous upgrading of vocational knowledge and skills for gainful employment;
- By developing team spirit for working together for sustainable social and economic growth.



Followings are some schemes of Poverty alleviation schemes generating income

Programmes	Characteristics
1. PM's Employment Generation Programme:	Initiated on 15 th August 2008 by Prime Minister.
2. Integrated Rural Development Programme (IRDP):	Started in 1980. Main aim is to create sustainable opportunities for self-employment in the rural sector. Finance was provided to poor families for creating self employment. Funded by the centre and the state.
3. Food for Work Programme:	Central government started this program in 2004 in 150 most backward districts to provide wage employment. Food grains are supplied to states free of cost.
4. Jawahar Gram Samridhi Yojana (JGSY):	Started on 1 April 1999. The main objective of this program is for the development of rural areas and to give out sustained wage employment. This is only for those below poverty line.
5. National Rural Employment Guarantee Act (NREGA):	Started in 2006. Later modified as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) in October 2, 2009. Aims to guarantee the "right to work". 100 days of guaranteed wage employment in a financial year.
6. Sampoorna Grameen Rozgar Yojana (SGRY):	It came in existence by merging Jawahar Gram Samridhi Yojana (JGSY) and Employment Assurance Scheme (EAS). It was launched in September 2001 to provide additional wage employment in the rural areas.
7. Swarnjayanti Gram Swarozgar Yojana (SGSY)/ National Rural Livelihood Mission:	Started in 1 st April 1999 by providing self employment of the rural poor. IRDP and TRYSEM merged in this scheme.
8. Unemployed Youth Employment Generation Programme (UYEGP):	The Micro, Small and Medium Enterprises Department, Government of Tamil Nadu introduced the scheme. Aims: To mitigate the unemployment problems of socially and economically weaker section of the society, particularly among the educated and unemployed to become self employed in their native places itself and to prevent the mass migration from rural areas to urban areas due to unemployment by setting up Manufacturing / Service / Business enterprises by availing loan up to the maximum of Rs.10 Lakhs, Rs. 3 Lakhs and Rs. 1 Lakh.
9. TAHDCO	To increase the entrepreneurs in the community through setting up of petrol/diesel outlet.

8.7 Rights of a Girl Child

To achieve true women empowerment, girl children rights are important. This is because girls of today are the women of tomorrow. It is the role of social welfare organizations to support for the eradication of female infanticide and women empowerment. Some yardsticks of women empowerment are:

Helping women to develop a positive self-image and increase their confidence level.

Enabling them to develop the ability to think critically.

Ensuring that they have equal participation in decision making, whether it's in the family or at the community level.

Providing economic independence to women.

Why Girl Children Should be Given Rights

The role of education is extremely important here and goes a long way in empowering women. Girl children need to be sent to school, provided quality and holistic education. Numerous benefits come with educating girls the right way. Educated girls are able to take the right decisions in life. For example, when an educated girl falls sick, she will have better understanding and awareness to avail proper healthcare services. At the same time, a society in which girls are educated will see less child

marriages, decreased levels of poverty and heightened participation of women in socio-economic processes. Educating a girl has far-reaching impacts. When a woman is educated, an entire generation benefits from it. Therefore ensuring the rights and privilege of a girl child pave way for development of a community.

Literally meaning 'Educate the Girl Child, Save the Girl Child' the Beti Padhao, Beti Bachao Scheme is an ambitious scheme of the Government of India which is intended to generate massive awareness, improvement of quality of welfare services for females and helping them (girls and women) access these services better. It was Introduced in October 2014, It is a joint initiative of three important Central Government ministries – the Ministry of Women and Child Development, Ministry of Health and Family Welfare and Ministry of Human Resource Development. It is therefore imperative that both government and non-government organizations work in cohesion to spread the message of saving and educating the girl child.

Human Rights of a Girl Child

- Right to freedom from discrimination based on gender, age, race, colour, language, religion, ethnicity, or any other status.
- Right to a standard of living adequate for a child's intellectual, physical, mental, and spiritual development.
- Right to a healthy and safe environment.
- Right to the highest possible standard of health, and to equal access to health care.
- Right to equal access to food and nutrition.
- Right to life and the freedom from prenatal sex selection.
- Right to education.





SUMMARY

- The key areas for developing the community include to provide safe drinking water, Rain water harvesting, proper waste disposal and sanitation, ensuring availability of crops through organic farming, use of medicinal plants to cure common ailments, protecting the rights of a girl child and alleviation of poverty through income generating schemes.
- **Community development** as “a process where community members come together to take collective action and generate solutions to common problems.
- Water must be conserved for future use. One method of conserving water is to collect rainwater and store it for later use. This is called rain water harvesting. Recent trends in rain water harvesting are Surface runoff harvesting, Roof top rainwater harvesting, Catchments and Filter.
- Safe drinking water is most important for consumption. It is necessary to protect drinking water from contamination for public health, economic and environmental reasons. Water purification methods help to ensure availability of safe drinking water. **Water purification** is the process of removing undesirable chemicals, biological contaminants, suspended solids and gases from water. Water is purified through large scale and domestic methods.
- **Waste management or waste disposal** are all the activities and actions required to manage waste from its inception to its final disposal and prevent the spread of communicable diseases.
- Organic food is food produce which has been grown on farms using environment-friendly practices and is free of artificial

fertilizers, chemical insecticides and pesticides. Organic food does not include any form of genetically modified crop.

- Medicinal plants are used for therapeutic properties like aloe vera, coriander leaves, curry leaves, mint leaves, ginger, garlic etc.
- Ensuring the rights and privilege of a girl child pave way for development of a community. Some important rights are freedom to Education, Freedom to live life freely.
- **Income-Generating Programmes** are those types of vocational continuing education **programmes** which help participants acquire or upgrade vocational skills and which enable them to conduct **income generating** activities.

A-Z

GLOSSARY

- Weeds (களைகள்) – wild plant growing in unwanted place.
- Hormones (ஹார்மோன்) – chemical substance produced by body.
- Antibiotic (நோய் கிருமி கட்டுப்படுத்தி) – medicine that inhibits or destroys the growth of microorganisms.
- Anthelmintic (குடல்பூச்சு அகற்றும் மருந்து) – medicine used to destroy parasitic worms.
- Empower (அதிகாரம்) – authority or power to do something.
- Suspended impurities (கசடுகள்) – constituent which impairs the purity of something in suspension.
- Depression (மனஅழுத்தம்) – sadness.
- Antioxidants (ஆக்ஜினைற்றி) – substance that inhibits oxidation to delay deterioration.
- Flatulence (வாயு) – Accumulation of gas in the alimentary canal.



EVALUATION

I. Choose the correct answer

1. Community development seeks to empower _____.

- a) Individual alone
- b) Individual and Groups
- c) Groups only
- d) Women

2. **ASSERTION:** Organic foods when served fresh provides maximum nutrients.

REASON: Foods needs to be served always fresh to obtain maximum nutrients.

- a) Assertion is correct
- b) Reason is correct
- c) Reason for assertion is correct
- d) Assertion for reason is correct

3. Organic farming needs

- a) Farming with chemicals
- b) Farming without chemicals
- c) Farming with the use of pesticides
- d) Farming with the use of artificial fertilizer

4. pH of rain water is _____.

- a) Acidic
- b) Basic
- c) Neutral
- d) None of the above

5. Match the following

- a) Prime Minister Employment Generation Scheme 2006
- b) Swarnjayanti Gram Swarojgar Yojana (SGSY): 2001

c) National Rural Employment Guarantee Act 1999 (NREGA):

d) FOOD FOR WORK 2008.

6. Cheapest and safest method of water purification _____.

- a) Boiling
- b) Filtration
- c) Sedimentation
- d) Osmosis

7. Match the medicinal use of

a)	Garlic	Relieves digestion problems
b)	Coriander	Improves bowel syndrome
c)	Mint	Hair growth
d)	Curry leaves	Reduces cholesterol

8.

Recycling components are

9. _____ is celebrated as world water day

- a) 2 March
- b) 22 September
- c) 12 August
- d) 22 March



II. Write Very Short Answers (2 marks)

- 1. Write the medicinal properties of Aloe vera and Ginger.
- 2. What is the main aim of rain water harvesting?

3. Define waste management.
4. List the barriers which prevents buying organic food.
5. Write 2 different methods of water purification.

III. Write Short Answers (3 marks)

1. How do landfills severely affect the environment?
2. What are the aims of income generating schemes?
3. A building which was constructed 20 years back by your neighbour had no provision to store rain water during rainy season. Suggest ways to store the rain water effectively.
4. What is vermicomposting?
5. Write 3 positive aspects of organic food.
6. Explain the Beti Bacho Beti Padhoa scheme to an illiterate women.
6. Write the advantages of kitchen garden.

IV. Write in detail (5 marks)

1. Community development seeks to empower individuals – Justify.
2. Organic food does not lead to hormonal imbalance - explain.

3. Vinodhini is a 18 year old village girl. She is ignorant of her rights in the society. As a friend suggest her the rights of a girl child.
4. Girls of today are women of tomorrow. Brief this statement with women empowerment.
5. Explain the different methods of waste disposal.
6. Is reverse osmosis water safe for drinking?
7. Explain the different methods of purification of water.
8. Write a detailed note on kitchen garden. List the plants that can be grown in kitchen garden.



REFERENCES

1. "Disinfection with Chlorine | Public Water Systems | Drinking Water | Healthy Water". CDC. Retrieved 11 February 2018.
2. Microbiology by Anna K. Joshua, First Edition 1971, Popular Book Depot.
3. Medicinal Plants by S.K. Jain, 1968, National Book Trust, India.
4. Economic Botany by B.P. Pandey, S. Chand & Company, 2000.