



Government of Tamilnadu

Department of Employment and Training

Course : TNPSC Group I Mains Material
Subject : Environment, Biodiversity and Disaster Management
Topic : Environmental Health and Sanitation

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Commissioner,

Department of Employment and Training.

ENVIRONMENTAL HEALTH AND SANITATION

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Health:

Health refers to a state of complete emotional and physical well-being. Healthcare exists to help people maintain this optimal state of health.

As defined by World Health Organization (WHO), it is a "State of complete physical, mental, and social well being, and not merely the absence of disease or infirmity."

Health is a dynamic condition resulting from a body's constant adjustment and adaptation in response to stresses and changes in the environment for maintaining an inner equilibrium called homeostasis.

Hygiene is a science of the establishment and maintenance of health conditions or practices (as of cleanliness) conducive to health. Poor personal hygiene. Brushing your teeth regularly is an important part of good oral hygiene. Hygiene is the practice of keeping yourself and your surroundings clean, especially in order to prevent illness or the spread of diseases.

ENVIRONMENTAL HEALTH

Environmental health refers to aspects of human health (including quality of life) that are determined by physical, chemical, biological, social and psychosocial factors in the environment.

The Importance of Environmental Health:

The people who live in the earth need safe, healthy and supportive environments for good health. The environment in which we live is a major determinant of our health and wellbeing. We depend on the environment for energy and the materials needed to sustain life, such as:

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1. Clean air
 2. Safe drinking water
 3. Nutritious food
 4. Safe places to live.

Maintaining a healthy environment is central to increasing quality of life and years of healthy life. Environmental factors are diverse and far reaching. They include:

1. Exposure to hazardous substances in the air, water, soil, and food
2. Natural and technological disasters
3. Climate change leads temperature rising
4. Occupational hazards
5. The built environment Increased level of pollution
6. Lack of infrastructure
7. Sea level rising leads floods in some part of areas

Poor environmental quality has its greatest impact on people whose health status is already at risk. Therefore, environmental health must address the societal and environmental factors that increase the likelihood of exposure and disease.

Problems Associated with Environmental Health:

Air pollution causes respiratory problems, cardio-vascular disease and lung cancer.

1. Water pollution cause diarrhoeal illnesses, eye and ear and throat Infection.
2. The highest exposure of sunlight causes skin cancer, melanoma and Non melanoma related issues.
3. The bite of mosquitoes and other insects causes fever like dengue, malaria and etc.
4. Noise pollution cause sleeping disorder, hearing loss and cardiovascular problems.
5. Silicosis caused by deposit of silica in the lungs of workers working and silica industries or at the sand blasting sites.

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6. Asbestosis caused due to settlement of asbestos in lungs.
 7. Itai-Itai disease- due to cadmium
 8. Sulphur oxide that caused severe smog which is released largely by burning petroleum and crude oil.

The Centre For Environmental Health:

The Centre for Environmental Health in New Delhi to assess the impact of environment-related problems on health. The centre will assess the impact of environment-related problems like climate change, air pollution, pesticide use and sanitation on health. It is a joint initiative of the Tata Institute of Social Science (TISS) and Public Health Foundation of India (PHFI). The centre will conduct research across wide range of environmental health issues, including water, chemical exposure and hygiene. It will also establish a policy engagement platform with regular meetings with the civil society, government, academia and private sector to develop strategies for better implementation of the eco-friendly policies.

SANITATION:

World Health Organization – Sanitation generally refers to the provision of facilities and services for the safe disposal of human urine and faeces. The word 'sanitation' also refers to the maintenance of hygienic conditions, through services such as garbage collection and wastewater disposal."

A safe sanitation system is a system designed and used to separate human excreta from human contact at all steps of the sanitation service chain from toilet capture and containment through emptying, transport, treatment (in-situ or offsite) and final disposal or end use.

Inadequate sanitation is a major cause of disease world-wide and improving sanitation is known to have a significant beneficial impact on health both in households and across communities.

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The Government Goals:

1.The sustainable Development Goal:

The Sustainable Development Goals 2015-2030, a successor to Millennium Development Goals, include Goal 6 for clean water and sanitation for ensuring their availability and sustainable management.

Goal 6.1 specifically says that by 2030, countries including India should ‘achieve universal and equitable access to safe and affordable drinking water for all’, and

Goal 6.2 stipulates that by 2030, countries should also “achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.”

2.Ecosan Toilets

About 150 liters of wastewater at an average is generated by an Indian individual daily, and a large amount of it is generated from toilets. Ecological sanitation (Eco-San) is a sustainable system for handling human excreta by using dry composting toilets. Eco-San toilets not only reduce wastewater generation but also generate the natural fertilizer from recycled human excreta, which forms an excellent substitute for chemical fertilizers. This method is based on the principle of recovery and recycling of nutrients from excreta to create a valuable supply for agriculture. ‘Eco-San’ toilets are being used in several parts of India and Sri Lanka.

3.Swachh Bharat Mission:

To accelerate the efforts to achieve universal sanitation coverage and to put focus on sanitation, the Prime Minister of India launched the Swachh Bharat Mission on 2nd October, 2014.

The Mission Coordinator for SBM is Secretary, Ministry of Drinking Water and Sanitation (MDWS) with two Sub-Missions, the Swachh Bharat Mission (Gramin) and the Swachh Bharat Mission (Urban). Together, they aim to achieve Swachh Bharat by 2019, as a fitting tribute to Mahatma Gandhi on his 150th Birth Anniversary.

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The aim of Swachh Bharat Mission (Gramin) is to achieve a clean and Open Defecation Free (ODF) India by 2nd October, 2019.

Objectives:

1. To bring about an improvement in the general quality of life in the rural areas, by promoting cleanliness, hygiene and eliminating open defecation.
2. To motivate communities to adopt sustainable sanitation practices and facilities through awareness creation and health education.
3. To encourage cost effective and appropriate technologies for ecologically safe and sustainable sanitation.
4. To develop community managed sanitation systems focusing on scientific Solid & Liquid Waste Management systems for overall cleanliness in the rural areas.
5. To create significant positive impact on gender and promote social inclusion by improving sanitation especially in marginalized communities.

4.Bio-toilets

Indian railways aim to install human waste discharge free bio-toilets in all its coaches and the same would be completed by September 2019. It will help in proving cleanliness and hygiene also preventing corrosion of the tracks. It is part of the Swachh Bharat Mission.

The environment-friendly bio-toilets for passenger coaches were developed jointly by Indian Railways and Defence Research and Development Organization (DRDO).

In the bio-toilet fitted coaches, human waste is collected in bio digester tanks below the toilets and is decomposed by a consortium of anaerobic bacteria.

By the process of hydrolysis, acetogenesis, acidogenesis and methanogenesis, the anaerobic bacteria convert human faecal matter into water and small amount of gases (including methane).

5.SWAJAL Yojana:

1. Swajal is community owned drinking water programme for sustained drinking water supply.

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2. The scheme aims at ensuring availability of clean drinking water to every household round year and also generate employment.
 3. Under it, 90% of the project cost is borne by Government and remaining 10% cost is contributed by the community.
 4. The Operations and management of the project will be taken care by the local villagers.
 5. Under this scheme, government aims to provide villages with piped water supply powered by harnessing solar energy.
 6. Hundreds of rural technicians will be trained under this scheme for operation and maintenance of Swajal units.

Fact: Schemes has been launched in 115 aspirational districts.

Question:

1. What is environment health? Explain the problems associated with environment.
2. Discuss the various government measures to provide better sanitation.

