

CERTIFICATE COURSE ON MANAGEMENT OF ENVIRONMENTAL CRISIS, 2023-2024

INTRODUCTION

The environmental crisis refers to the escalating degradation of the Earth's natural systems, resulting from human activities such as pollution, deforestation, habitat destruction, and climate change. It encompasses various interconnected issues like loss of biodiversity, air and water pollution, global warming, and depletion of natural resources, posing significant threats to ecosystems, wildlife, human health, and socio-economic stability.

Management of Environmental Crisis includes the process of planning, organizing, leading, and controlling resources (such as people, finances, and materials) within an organization to achieve specific goals and objectives efficiently and effectively. It involves coordinating the efforts of individuals or teams to accomplish tasks and make decisions that contribute to the success of the organization.

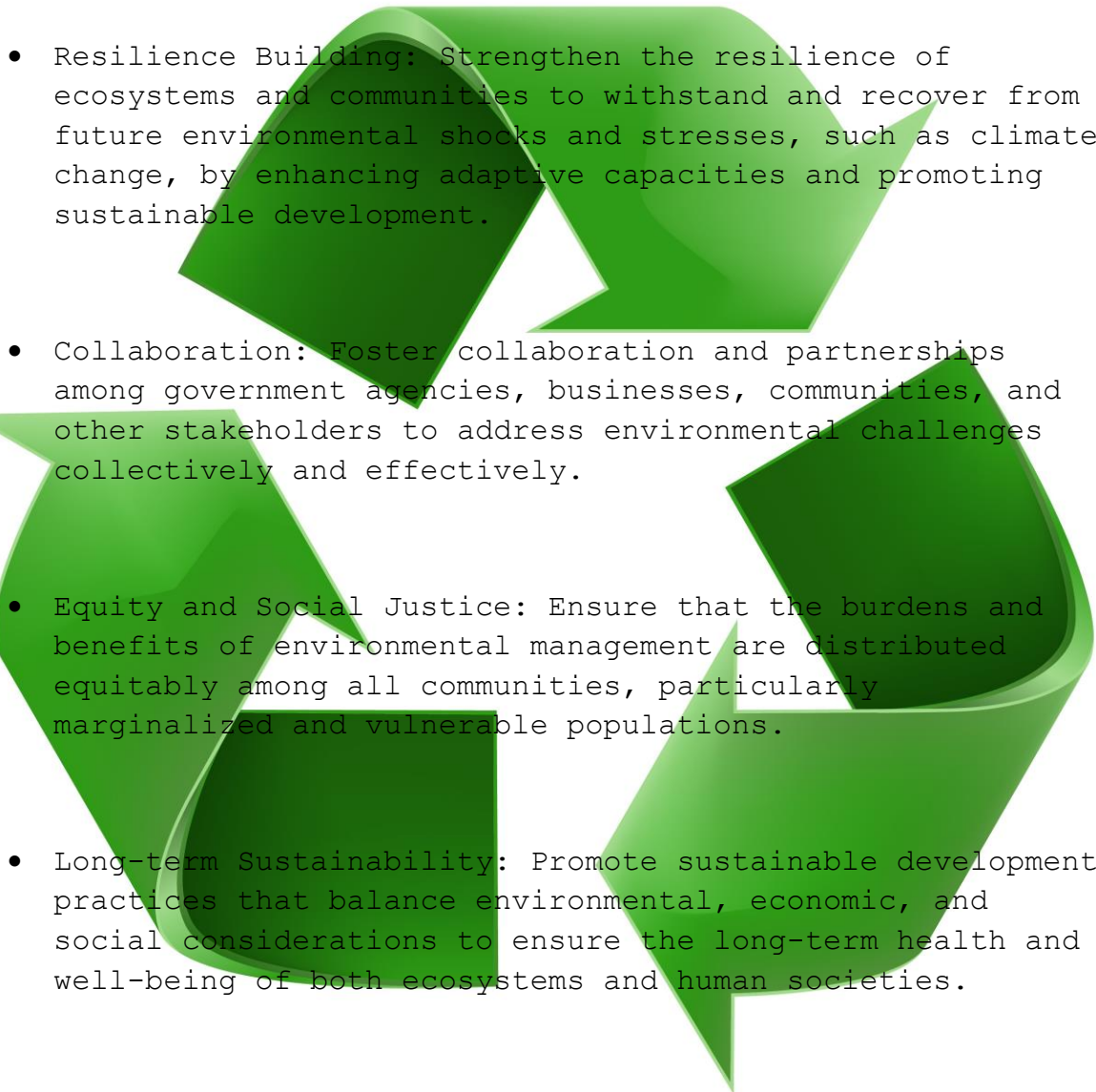
Geography Department of Gokhale Memorial Girls' College providing a free add on course on "Management Of Environmental Crisis " coordinated by Dr. Mahua Dutta .

OBJECTIVES OF MANAGEMENT OF ENVIRONMENTAL CRISIS

The objectives of managing environmental crises typically include:

- **Mitigation:** Minimize the immediate impacts of the crisis, such as pollution, habitat destruction, or natural disasters, to prevent further harm to ecosystems and human health.
- **Restoration:** Restore affected ecosystems, habitats, and biodiversity to their pre-crisis state as much as

possible, through measures such as reforestation, habitat rehabilitation, and pollution cleanup.

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- **Prevention:** Implement measures to prevent future environmental crises through regulations, sustainable resource management practices, and public education.
 - **Resilience Building:** Strengthen the resilience of ecosystems and communities to withstand and recover from future environmental shocks and stresses, such as climate change, by enhancing adaptive capacities and promoting sustainable development.
 - **Collaboration:** Foster collaboration and partnerships among government agencies, businesses, communities, and other stakeholders to address environmental challenges collectively and effectively.
 - **Equity and Social Justice:** Ensure that the burdens and benefits of environmental management are distributed equitably among all communities, particularly marginalized and vulnerable populations.
 - **Long-term Sustainability:** Promote sustainable development practices that balance environmental, economic, and social considerations to ensure the long-term health and well-being of both ecosystems and human societies.
 - **Prospectus of Management of environmental crisis**

A prospectus for managing environmental crises typically outlines the strategies, goals, and actions required to address and mitigate environmental challenges. Here's a brief outline you could follow:

PROSPECTS: MANAGEMENT OF ENVIRONMENTAL CRISIS

I. Introduction

Overview of the current environmental crisis.

Importance of proactive management.

Objectives of the prospectus.

II. Understanding the Crisis

Analysis of key environmental issues (e.g., climate change, pollution, habitat destruction).

Identification of root causes and contributing factors.

Assessment of the impacts on ecosystems, human health, and economies.

III. Strategic Framework

Development of a comprehensive strategy for crisis management.

Integration of prevention, mitigation, adaptation, and restoration efforts.

Collaboration with stakeholders: governments, NGOs, businesses, and communities.

IV. Goals and Objectives

Setting measurable targets for environmental improvement.

Prioritizing actions based on urgency and impact.

Ensuring equity and justice in addressing environmental challenges.

V. Action Plan

Implementation of specific initiatives and projects.

Allocation of resources (financial, technological, human).

Monitoring and evaluation mechanisms to track progress.

VI. Key Initiatives

Examples of proposed interventions:

Renewable energy transition.
Sustainable land use practices.
Pollution control and waste management.
Conservation and restoration of ecosystems.
Public awareness and education campaigns.

VII. Risk Management

Assessment of potential barriers and obstacles.
Contingency planning for unexpected events.
Integration of risk reduction measures into the overall strategy.

VIII. Funding and Financing

Identification of funding sources (government budgets, grants, private investments).
Innovative financing mechanisms (carbon pricing, green bonds, public-private partnerships).
Ensuring transparency and accountability in financial management.

IX. Monitoring and Evaluation

Establishment of indicators to measure progress.
Regular reporting and communication of results.
Adaptation of strategies based on feedback and lessons learned.

COURSE STRUCTURE

[A] THEORY

29 HOURS

POPULATION ECOLOGY

2 HOURS

- Population Characteristics
- Population Growth Models
- Species
- Carrying Capacity of Earth

BIOSPHERE

3 HOURS

- Extent of the Biosphere
- Working of the Biosphere
- Importance of the Biosphere
- Alpha, Beta, Gamma Diversity
- Biomes
- Global Biomes
 - Major Biomes of the World
 - WWF Classification of Biomes
 - Terrestrial Biomes
 - Aquatic Biomes
 - Indian Biomes

BIODIVERSITY

3 HOURS

Conservation, environmental pollution and degradation,
Environmental impact assessment
Disaster and Disaster management

ENVIRONMENT AND ECOLOGY: BASIC UNDERSTANDING

3 HOURS

- Introduction
- Categories of Environment
- Features of Environment
- Components of Environment
- Ecology

ECOSYSTEM AND ITS DYNAMICS

2 HOURS

- Ecosystem Definitions
- Properties of Ecosystem
- Components of Ecosystem
 - Abiotic Factors
 - Biotic Factors
- Ecosystem Dynamics

BIOGEOCHEMICAL CYCLES

2 HOURS

- Gaseous Cycle
 - Carbon Cycle
- Human Impact on the Carbon Cycle
- Effects of High Concentration of Greenhouse Gases
 - Hydrological Cycle

- Nitrogen Cycle
- Human Impact on the Nitrogen Cycle
- Oxygen Cycle
- Sedimentary Cycle
- Impact on the Sulphur Cycle

CLIMATE CHANGE

2 HOURS

- Factors Affecting Climate Change
- Impact of climate change & its mitigation
- Climate Change Management
 - Conventions
 - International Organisations

ENVIRONMENTAL IMPACT ASSESSMENT SUSTAINABLE PRACTICES

3 HOURS

- Impact of Agriculture on Environment
 - Sustainable Agriculture
- Sustainable Agriculture
 - Hi-tech Farming Methods
 - Rain Water Harvesting
 - Green Buildings and their Rating System in India
- Eco-tourism - Advantages & Disadvantages of Eco-tourism

Water Degradation

- Measurement of Water Pollution
- Harmful Effects of Water Pollution
- Delhi Pollution

WASTE MANAGEMENT

3 HOURS

- Solid Waste Management
 - Salient features of SWM Rules, 2016
- e-waste Management
 - Pollutants and their Health Impacts
 - Importance of the E-Waste Management
 - E-waste (Management & Handling) Rules, 2016
- Biomedical Waste
 - Hazards Associated with Waste Management
 - Bio-Medical Waste Management Rules, 2016
- Hazardous Waste
 - Hazardous Waste Treatment
 - Hazardous and Other Wastes (Management & Transboundary Movement) Rules, 2016

CLIMATE CHANGE**3 HOURS**

- Factors Affecting Climate Change
- Impact of climate change & its mitigation
- Climate Change Management
 - Conventions
 - International Organisations

POLLUTION & DEGRADATION**3 HOURS**

- Land Degradation
 - Causes and Impact of Land Degradation
 - Desertification
 - Sustainable Land Management
 - Soil Erosion
 - Problems due to Excessive Irrigation
 - Soil Conservation
- Air Pollution
 - Causes of Air Pollution
 - Harmful Effects of Common Air Pollutants
 - Control of Air Pollution
- Marine Pollution
 - Effects of Marine Pollution
 - Coastal Regulation Zone Notification, 2011
- Mining & Pollution
 - Effects of Mining on Environment
 - Concept of Sustainable Mining
 - Acts to regulate the adverse effects of Mining Activities
- Other Pollution
 - Effects of Noise Pollution on Human Health
 - Harmful Effects from Biological Contaminants
 - Harmful Effects of Radioactive Pollution
 - Nuclear Accidents
- Water Degradation
 - Measurement of Water Pollution
 - Harmful Effects of Water Pollution
 - Delhi Pollution

[B] GROUP DISCUSSION**2 HOURS****[C] ASSESSMENT****1 HOUR****TOTAL HOURS****32**