

Course No. 1643

Climate-Resilient Public Health Systems Training Course

**PUBLIC HEALTH, ENVIRONMENT & SUSTAINABILITY MANAGEMENT
GOVERNMENT & PUBLIC SECTOR**

DURATION

5 Days

DELIVERY

Classroom



Course Overview

The Climate-Resilient Public Health Systems Training Course is a specialized professional program designed to strengthen the ability of public health systems, organizations, and operational teams to anticipate, prepare for, respond to, and recover from climate-related health risks. The course examines the growing interaction between climate change, environmental health, occupational health, emergency preparedness, and continuity of essential services, providing participants with practical approaches for building stronger and more adaptable health systems.

Climate-related hazards such as extreme heat, flooding, drought, storms, deteriorating air quality, water stress, and changing patterns of infectious disease can create complex challenges for public health organizations and operational environments. The program enables participants to understand these interconnected risks, assess exposure and vulnerability, identify critical weaknesses, and establish priorities for adaptation and resilience. Particular attention is given to converting climate and health information into practical risk-management decisions.

The course is highly relevant to the oil and gas sector, where climate conditions can affect workforce health, remote and offshore operations, industrial facilities, emergency medical services, water availability, environmental conditions, and operational continuity. Participants examine how climate-related health risks can be incorporated into occupational health, Health, Safety and Environment management, emergency response, business continuity, sustainability, and enterprise risk management frameworks.

The program is strongly practical and emphasizes risk assessment, vulnerability analysis, adaptation planning, early warning, emergency preparedness, health surveillance, and resilience performance measurement. Through case studies, scenario exercises, and applied workshops, participants develop practical solutions for strengthening climate-resilient public health systems and protecting employees, communities, and critical services under changing environmental conditions.

Objectives

- Analyze the relationship between climate change, public health, environmental health, and occupational health within organizational and operational contexts.
- Assess major climate-related health risks, including extreme heat, flooding, drought, storms, air pollution, water stress, and climate-sensitive diseases.

- Identify vulnerable populations, workers, facilities, communities, and services exposed to climate-related health risks.
- Apply structured methodologies to assess climate exposure, vulnerability, sensitivity, and adaptive capacity.
- Evaluate the resilience of public health systems and operational facilities against climate-related disruptions.
- Develop practical climate adaptation measures based on identified health, environmental, and operational risks.
- Design appropriate preparedness and response measures for climate-related health emergencies.
- Strengthen early-warning, health surveillance, and environmental monitoring approaches for climate-sensitive risks.
- Integrate climate resilience considerations into occupational health, HSE, emergency management, sustainability, and business continuity processes.
- Develop meaningful indicators for monitoring climate-health resilience, preparedness, response capacity, and organizational performance.
- Assess gaps in existing climate and public health preparedness arrangements and establish improvement priorities.
- Develop a practical climate-resilience action plan for a public health organization, industrial facility, or oil and gas operation by the end of the course.

Who Should Attend

This course is designed for public health managers, environmental health professionals, occupational health specialists, health and safety managers, HSE professionals, environmental managers, sustainability professionals, emergency preparedness and response personnel, climate risk specialists, health program managers, epidemiology and health surveillance professionals, and specialists responsible for environmental and public health risk management.

It is particularly relevant to professionals working within the oil and gas, energy, industrial, and infrastructure sectors, including HSE managers, occupational health managers, site medical personnel, operations managers, facility managers, emergency response teams, business continuity professionals, environmental specialists, sustainability managers, and risk professionals. The course is also suitable for government officials, public-sector managers, regulatory professionals, senior executives, and decision makers responsible for public health policy, climate resilience,

environmental protection, workforce wellbeing, and organizational preparedness.

Learning Outcomes

- Explain how climate change can influence public health, environmental health, occupational health, and health system resilience.
- Identify key climate-related hazards and evaluate their potential health and operational consequences.
- Conduct a structured assessment of climate exposure and vulnerability within a public health or operational environment.
- Evaluate the potential health impacts of extreme heat, flooding, drought, storms, air pollution, and water-related risks.
- Assess climate-related occupational health risks affecting workers in industrial, remote, offshore, and outdoor environments.
- Identify weaknesses in health infrastructure, emergency preparedness, medical services, and essential-service continuity.
- Prioritize climate-health risks according to exposure, vulnerability, potential impact, and organizational capacity.
- Develop practical adaptation and risk-reduction measures for identified climate-related health threats.
- Design early-warning, monitoring, surveillance, and reporting mechanisms for climate-sensitive health risks.
- Strengthen emergency preparedness and response plans for climate-related public health events.
- Integrate climate resilience into HSE management, enterprise risk management, sustainability, and business continuity planning.
- Prepare an actionable climate-resilience plan with defined priorities, responsibilities, monitoring indicators, and implementation measures.

Course Outline

DAY 01

Foundations of Climate Resilience and Public Health Systems

- Understanding climate change and its implications for public health systems
- The relationship between climate hazards, environmental conditions, and health outcomes
- Direct and indirect health impacts of climate change
- Extreme heat, heat stress, flooding, drought, storms, and other climate-related hazards
- Climate impacts on air quality, water quality, sanitation, and environmental health
- Climate-sensitive infectious diseases and changing patterns of health risks
- Vulnerable populations, occupational groups, and communities
- Understanding exposure, sensitivity, vulnerability, adaptive capacity, and resilience
- Characteristics of climate-resilient public health systems
- Maintaining essential health services during climate-related disruptions
- Organizational preparedness and resilience principles

PRACTICAL APPLICATION

Preliminary assessment of climate resilience for a public health organization or operational facility

DAY 02

Climate and Health Risk Assessment and Vulnerability Analysis

- Principles and frameworks for climate-health risk assessment
- Identifying climate hazards, exposure pathways, and potential health consequences
- Assessing exposure, sensitivity, vulnerability, and adaptive capacity
- Occupational heat exposure and heat-stress risk assessment
- Flood, storm, drought, and extreme-weather risk assessment
- Water availability, water quality, and climate-related health risks
- Air pollution, environmental exposure, and occupational health risks
- Climate risks affecting remote and resource-constrained locations

DAY 02 — CONTINUED

- Assessing the impact of climate hazards on health services and critical resources
- Risk prioritization based on likelihood, severity, exposure, and vulnerability
- Developing climate-health risk registers and risk profiles

PRACTICAL APPLICATION

Conducting a climate vulnerability assessment and establishing priority risks for a selected organization or site

DAY 03

Building Climate-Resilient Health Systems in the Oil and Gas Sector

- Climate change and occupational health risks in oil and gas operations
- Managing heat stress in onshore and offshore working environments
- Protecting workers during extreme temperatures and changing weather conditions
- Climate-related health risks in exploration, drilling, production, and processing operations
- Health challenges associated with offshore and remote facilities
- Climate impacts on site medical services, emergency medical response, and worker support
- Water, sanitation, hygiene, and environmental health management at remote locations
- Integrating climate-health risks into HSE management systems
- Operational continuity during extreme weather and climate-related disruptions
- Integrating climate resilience into emergency management and business continuity
- Coordination between occupational health, operations, HSE, emergency response, and sustainability teams

PRACTICAL APPLICATION

Assessing the climate resilience of an oil and gas facility and developing workforce protection measures

DAY 04

Climate Adaptation, Emergency Preparedness, and Response

- Principles of climate adaptation and public health resilience
- Identifying and evaluating climate adaptation options
- Developing climate-related health preparedness strategies
- Early-warning systems for climate and public health risks
- Preparedness for extreme heat, flooding, storms, drought, and other climate events
- Emergency medical and public health response to climate-related incidents
- Maintaining essential health and operational services during emergencies
- Medical, human-resource, and logistical preparedness for climate events
- Risk communication and public health awareness during climate emergencies
- Protecting vulnerable workers, communities, and high-risk populations
- Post-event recovery, evaluation, and lessons learned

PRACTICAL APPLICATION

Simulation of a climate-related health emergency and development of an integrated preparedness, response, and recovery plan

DAY 05

Governance, Monitoring, and Strategic Climate Resilience Planning

- Governance of climate resilience and public health preparedness
- Integrating climate risks into public health strategy and enterprise risk management
- Developing policies and procedures for climate-resilient health systems
- Climate-health resilience indicators and performance measurement
- Health, environmental, and climate data monitoring and trend analysis
- Using climate and health information to support evidence-based decision making
- Reporting climate-health risks and resilience performance to senior management
- Integrating climate resilience with HSE, sustainability, and environmental management
- Linking climate adaptation with business continuity and operational resilience

DAY 05 — CONTINUED

- Identifying capability, resource, infrastructure, and preparedness gaps
- Continuous improvement and long-term resilience planning

FINAL WORKSHOP

Development of a comprehensive Climate-Resilient Public Health Systems action plan covering risk assessment, vulnerability analysis, adaptation priorities, workforce protection, early warning, emergency preparedness, essential-service continuity, governance, performance indicators, and implementation priorities.

Register or Request More Information

Course page: <https://quest-training.com/courses/climate-resilient-public-health-systems-training-course>

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