

A satellite view of Earth is shown in the upper right quadrant, tilted diagonally. A large, solid blue diagonal banner covers the lower left and middle sections of the image. The text 'ENVIRONMENTAL HEALTH' is written in white, bold, uppercase letters on this banner. An orange diagonal line runs across the top of the image, separating the white background from the satellite image.

# ENVIRONMENTAL HEALTH

## Introduction to Environmental Health

Environmental and occupational health are important public health disciplines. Training and education in these fields can shed light on current public health problems, local and regional health issues, future health needs and challenges, epidemiology of diseases related to environmental or occupational exposures; and assist legislators with their decisions on health policies.

Countries in the EMR suffer from a wide variety of environmental and occupational problems, ranging from basic sanitary control measures to a lack of advanced research in this field. Issues exist in the region regarding agricultural health, workplace safety, outdoor and indoor air quality, food safety, water quality, toxic waste, and issues related to climate change.

Therefore, offering training programs in this field is crucial for the safety of people and for the advancement of the economy and life quality in the EMR region, in addition to providing stability in war-torn countries.

## Environmental Health Programs

The training in Environmental Health consists of three programs, with three months duration for each program:

[Program 1: Foundations in Global Environmental and Occupational Health](#)

[Program 2: Environmental Health Management](#)

[Program 3: Environmental Health Risk Management](#)

**Residents who complete the nine-month program requirements will be awarded a Higher Diploma Certificate (HDC)**

## Eligibility Criteria

- Bachelor's degree from a recognized university in health, medicine, behavioural, or social sciences, or any other related field of science.
- Preferably with work experience in a health-related field
- Demonstrated ability to study in English

### In All Programs:

#### Training Delivery method

- In-class method
- Blended learning method

#### Training Language

- Arabic
- English

## Who Should Apply

The programs are targeting professionals working for ministries of health, non-governmental organizations, and humanitarian agencies. They are also valuable for those looking for a career in environmental and occupational health.

## Program Overview

The purpose of the Foundations in Global Environmental and Occupational Health (GEOHealth) program is to provide residents with the basic knowledge on core public health disciplines that are related to the field of GEOHealth. Residents completing this program will have a solid foundation in public health that enables them to take further steps in the field. GEOHealth modules and training are expected to bring together multiple disciplines to advance the ability of residents to use scientific methodologies in their future career.

## Learning Outcomes

By the end of the program, residents will be able to:

- Describe the major factors that influence the health of individuals and populations worldwide and their complexities
- Identify the major classes of environmental hazards, their sources, and mechanisms for injury and susceptibility
- Identify approaches for preventing and mitigating environmental hazards, and protecting populations from environmental hazards
- Describe a public health problem in terms of magnitude, person, place, and time, and calculate basic epidemiological measures
- Select and apply simple statistical analyses and interpret the results for given research hypotheses
- Apply knowledge of the principles of toxicology in the evaluation and prediction of exposure to toxic substances

## Training Courses

- Introduction to Public Health
- Basic Epidemiology
- Epidemiology of Environmental and Occupational Health
- Introduction to Global Environmental Health
- Principles of Toxicology

## Field Work

Residents spend seven weeks in the field work in order to be exposed to real-life situations and to practice the skills they gain with the guidance of a dedicated mentor. The following field projects are expected to be conducted during the field work period:

- Identify public health problems and comprehend the use of data in public health sectors
- Apply methods of epidemiology, biostatistics, and environmental health in the field
- Evaluate and distinguish environmental and occupational threats in a community

## Program Overview

Environmental health is a branch of public health that studies factors in the environment that affect human health and how those factors could be identified, prevented, assessed, and controlled. Those environmental factors could be physical, biological, social, and even psychological as well as pollutants or toxicants. Environmental exposures might be present in the air, water, or food, which can enter the human body through inhalation, ingestion, or absorption and may deter human health. This interdisciplinary program will introduce residents to public health issues associated with exposure to anthropogenic and naturally occurring chemical, microbial, and biological contaminants in air, water, soil, and food. Graduates will become professionals who work to identify, assess, and evaluate contaminants and their detrimental effects on human health. Environmental program graduates will be able to promote a healthier environment, intensify primary prevention, and influence public policies in all sectors to address the root causes of environmental and social threats to health.

## Learning Outcomes

By the end of the program, residents will be able to:

- Identify major foodborne illnesses and their potential sources
- Explain the steps to assess, control and prevent foodborne illnesses
- Identify the potential contaminants in water and explain how they are tested for
- Illustrate the major drinking water treatment processes
- Describe major causes of air pollution, their sources, health effects, and assessment
- Draw appropriate inferences from epidemiologic data related to environmental hazards

## Training Courses

- Food Safety and Public Health
- Water Quality Management
- Air Pollution and Air Sampling
- Environmental Health in Emergencies
- Applied Research in Environmental Health

## Field Work

Residents spend seven weeks in the field work in order to be exposed to real-life situations and to practice the skills they gain with the guidance of a dedicated mentor. The following field projects are expected to be conducted during the field work period:

- Apply latest techniques for heavy metal assessment, microbial analyses, air sampling, and chemical identification.
- Appropriately use the knowledge for critiquing major environmental health issues.
- Conduct common interventions during environmental health
- Propose solutions for a local environmental issue

Residents who complete the three-month program requirements will be awarded a Post Graduate Certificate (PGCert) issued by International Academy of Public Health (IAPH) and accredited by Agency for Public Health Education Accreditation (APHEA).

## Program Overview

The “Specialization in Environmental Health” is a continuation for the knowledge and skills gained in the “Advanced Environmental Health” program. Residents will be exposed to more advanced and in-depth topics in the field, which will prepare them to take the lead at their work and enhance their capabilities in the analysis of risk and management of environmental hazards. Courses in this program will increase the ability of residents to predict and analyze risks, design studies, and make judgements regarding the safety of communities. Training provided at this level is expected to further advance the residents’ skills in a wide range of technical, creative, conceptual, and managerial competencies. The curriculum will include an advanced Module in environmental epidemiology, research methods and design, risk management and communication, and management and leadership.

## Learning Outcomes

- Design research studies capable of exploring hazards and risks in the environment
- Apply the four steps in qualitative and quantitative risk assessment: hazard identification, dose-response evaluation, exposure assessment, and risk characterization
- Develop plans to manage environmental risks
- Apply the fundamental principles of communication and message development to design community outreach programs
- Develop written communication skills targeting the general public, policy makers, and media
- Train and educate others in the basic concepts of environmental health

## Training Courses

- Environmental Risk Assessment
- Environmental Risk Management
- Environmental Risk Communication
- Management and Leadership
- Scientific Writing

## Field Work

Residents spend seven weeks in the field work in order to be exposed to real-life situations and to practice the skills they gain with the guidance of a dedicated mentor. The following field projects are expected to be conducted during the field work period:

- 1- Apply latest methods in risk assessment for different environmental exposures
  - 2- Communicate risk assessment evaluation clearly to the public
  - 3- Conduct interventions for environmental health issues
  - 4- Analyze and criticize different research outlets
- At the end of the program, residents reconvene for final presentations and discussion.

Residents who complete the three-month program requirements will be awarded a Post Graduate Certificate (PGCert) issued by International Academy of Public Health (IAPH) and accredited by Agency for Public Health Education Accreditation (APHEA).



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