

# Environmental Health Disaster Management

**29<sup>th</sup> July – 3<sup>rd</sup> August 2018**

Venue: Rydges Southbank

Townsville, Queensland

**"Endorsed by IFEH"**



**Delivered and facilitated by:**



**Griffith University - EHADI Accredited Trainers**  
**Supported by NEHA/Center for Disease Control and Prevention (CDC) - Atlanta, USA and**  
**UNISDR - Incheon, Korea.**



## Key Trainers:

### **Tim Hatch, MPA, REHS**

Planning and Logistics Director  
Alabama Department of Public Health  
Center for Emergency Preparedness



Tim is highly qualified and experienced professional in Environmental Health and Disaster Management in America. Tim is the subject matter expert for their Environmental Health Training for Emergency Response course and the Healthcare Leadership course. Tim's disaster responses include: Hurricane Ivan (2004), Hurricane Katrina (2005), Kentucky Ice Storm (2009), widespread water outage in rural Alabama (2009), Gulf Oil Spill (2010), and Alabama Tornadoes (2011). Tim has made it his personal goal to learn all that he can about the environmental impacts on human health. Tim has spent the last few years responding to disasters across the south of America and he has learnt a lot about how environmental health fits into disaster preparedness and response.

### **Bob Handby**

Former Manager Water & Sanitation for International  
Emergencies  
Retired from Australian Red Cross



Bob Handby recently retired from the position as manager of Water & Sanitation for International Emergencies with the Australian Red Cross. Prior to this he had a 27 year career in local government as an Environmental Health Officer. Since 1984 Bob has undertaken numerous missions with the Red Cross to some of the world's greatest disasters, including conflict zones in Uganda, Iraq, Rwanda, Kosovo and Sri Lanka. Bob has worked extensively throughout Asia and the Pacific in natural disasters, including the Boxing Day Tsunami in Banda Aceh, Cyclone Nargis in Myanmar and floods in Pakistan. Although retired, Bob maintains an active role with the Institute in Emergency Management and has worked in disasters in Australia, including floods, bushfires and cyclones.

In December 2014 Bob came out of retirement to assist with the Ebola response in Sierra Leone where he lead a small team into an area which had a spike in Ebola cases resulting in the cleanup of a dysfunctional hospital and the building of an Ebola treatment center. Bob is an Ambassador for the Australian Red Cross and Life Fellow of Environmental Health Australia.

### **Why you should attend:**

EHA, TCC, Griffith and CDC US are extending an invitation to all Environmental Health and Disaster Management professionals to attend our Environmental Health in Disaster Management Course. This course is based on the Centers for Disease Control and Prevention's (CDC) successful Environmental Health Training in Emergency Response (EHTER) Awareness Level course run throughout America. This course is seen as international best practice for environmental health in disaster management. If you want your employees to be capable and competent in a disaster situation than this is the only course they need to be attending.

Attendance at this course will provide:

- Pathways to develop relationships and networks with members from EHA, CDC US, Local & State Governments and International professionals;
- Increase the knowledge and skills in disaster management;
- Further development of your Environmental Health Plan for disaster situations;
- To learn practical solutions to address a number of environmental health issues that occurs in a disaster; and
- Access to emerging thinking and hands on applications in all manners of environmental health tasks.

### **Introduction**

During the last quarter century, more than 3.4 million lives have been lost due to disasters, with billions more affected, and tens of billions of dollars spent on repairing damage and reconstructing lives<sup>i</sup>. Between 1980 and 2005, 90 per cent of the natural disasters, 72.5 per cent of casualties and 75 per cent of economic losses were caused by weather, climate and water related hazards such as droughts, floods, windstorms, tropical cyclones, storm surges, extreme temperatures, landslides and wild fires, or by health epidemics and insect infestations<sup>ii</sup>.

Environmental health disaster management has a significant role in addressing the impact of disasters on environmental health infrastructure and consequently the public. This includes protecting and mitigating risks to systems required for general health and wellbeing, such as water supply, food safety, sewerage, waste management and stormwater<sup>iii</sup>.

The preparedness and response actions to the environmental health aspects of disasters are vital in influencing the amount of human suffering, loss of life and ill-health. For example, over two years after the 2004 Indian Ocean tsunami caused massive devastation, people were living in temporary shelters and reconstruction projects were struggling to ensure that new housing had clean water supplies and good sanitation. At this time, diarrhoea was prevalent and there were a large number of vector-borne disease cases (dengue and malaria) in Indonesia's capital Aceh.<sup>iv</sup>

As the world's population and density continues to increase, the risk disasters pose to environmental infrastructure and conditions will continue to rise. Furthermore, increased urbanisation and industrialisation place a greater proportion of the world community at risk with the majority of the population migrating to urban, disaster-prone areas that are often without an adequate level of environmental health protective infrastructure<sup>v</sup>.

### **About the Course**

Environmental health and disaster management professionals from across the world have a critical function in mitigating public health risks during a response to a disaster. To ensure environmental health and disaster management professionals are adequately equipped to prepare for, respond to, recover from, and mitigate the adverse impacts of disasters, the International Federation of Environmental Health (IFEH), Environmental Health Australia (Qld) Inc., the USA Centers for Disease Control and Prevention (CDC) and the National Environmental Health Association (USA) have worked together to develop this Australian course.

This course will identify the critical role you, as an environmental health professional may have in mitigating environmental health risks from a disaster. This includes the need to conduct assessments to identify and address key risks such as those relating to drinking water, shelters, communicable diseases, food safety, wastewater, disease-causing vectors, solid waste and hazardous materials. Many of these risks are within the existing roles of environmental health professionals, however, a disaster response has unique challenges and a specific skill set is required from a range of professions and all levels of government.

The course recognises that environmental health professionals are in the best position to assess and address the impact of disasters due to their skill set and population-based focus. The content is guided by the successful Environmental Health Training in Emergency Response (EHTER) course run by CDC. It will provide training on how to apply environmental health skills and information in a disaster setting.

- i. Hogan D, Burstein J (2007). *Basic Perspectives on Disaster*. Lippincott Williams and Wilkins, Philadelphia.
- ii. World Meteorological Organization. WMO Disaster Risk Reduction Programme. Accessed 23 February 2012; Available from: <http://www.wmo.int/pages/prog/drr/>
- iii. Commonwealth of Australia (2008). Report of the 6th National Conference - Sustaining Environmental Health in Indigenous Communities.
- iv. Chang, M. (2007) . Health and housing after the Indian Ocean tsunami. *Lancet*, 369(9579):2066–2068.
- v. World Health Organization. Statistical Information System Page. Accessed 30 May 2011. Available at <http://www.who.int/whosis>

### Learning Objectives

- Demonstrate how environmental health infrastructure and practices are central to disaster management activities
- Provide an overview of key environmental health infrastructure and how this can be affected by natural disasters
- Understand what should be considered to mitigate the environmental health risks
- Provide guidance on planning, assessing, addressing and responding to environmental health impacts of a disaster using a population focus

### Course Structure

The course addresses the need for environmental health and other professionals to increase their education and training in disaster management. This course covers twelve core topics (see course content) and includes an exercise to demonstrate the relevance of these topics in the disaster setting. A provisional program is at [Attachment A](#).

### Course Content

The course core topics are outlined:

1. Disaster Management
  - Discuss plans, systems, guidelines and programs that guide the role of environmental health during the disaster management cycle
  - Identify and discuss disaster preparedness, response, recovery, and mitigation resources for environmental health
  - Outline the structures and parameters in which environmental health may function during a disaster
  - Discuss environmental health disaster preparedness and response systems
2. Drinking Water
  - Water issues faced in disasters
  - The role of environmental health practitioners in addressing water issues
    - Identification of key response partners
    - Increase understanding of the basic components of drinking water systems

- Practice and demonstrate basic skills related to water issues
  - Common tests, sampling, treatment and assessment
  - Identify key messages for the public and response partners
3. Food Safety
- Discuss food safety preparedness and response considerations
  - Operational considerations for mass feeding
  - Methods that may be used for assessing and mitigating food safety risks
  - Considerations for reopening food establishments
  - Actions that environmental health professionals can take to promote food protection
4. Wastewater
- Environmental health role in wastewater issues
  - Describe onsite (septic) and public sewer wastewater systems
  - Discuss system vulnerabilities, failures and recovery considerations
  - Identify alternative means of treating wastewater
  - Assessment and response to wastewater spills
  - Identify areas to improve wastewater preparedness
5. Solid Waste and Hazardous Materials
- Discuss solid and hazardous waste issues
  - Identify key response partners
  - Increase understanding of solid and hazardous waste planning, collection and disposal
6. Vector Control
- The impact of vectors disaster events
  - Control measures needed in disaster events
  - The role of environmental health in addressing vector control issues
  - Identification of key response partners
7. Shelters (including Red Cross involvement)
- Shelter types and their operations
  - The role of environmental health within shelters
  - Planning and operational considerations for shelters
  - Considerations and processes for conducting an environmental health shelter assessment
  - Identify key environmental health preparedness, response and recovery actions for shelters and interim housing
8. Building Health Assessments
- Discuss how disasters can impact buildings
  - Identify exterior and interior building components
  - Explain assessment preparation and process for buildings
  - Identify building-related health hazards
  - Exercise recovery and re-occupancy evaluations
  - Identify preventative actions to improve building resiliency
9. Responder Safety
- Identify common hazards that may be encountered during a response
  - How disaster related hazards can affect your health
  - Health and safety precautions that should be taken during a response
10. Animals in Disasters
- Discuss animals in shelters and evacuation centres
  - Discuss the benefits of animals in disaster recovery
  - Discuss the stressors on people where animals are concerned

## 11. Media Management

- Identify the types of communication tools
- Discuss the advantages and disadvantages of social media
- How media can work and go terribly wrong

## 12. Communicable Diseases in Disasters

- Identify diseases that can occur in disaster situations
- Look at practical ways to prevent the spread of diseases

### **Target Audience**

Environmental health specialists, professionals and students who plan to broaden their understanding of the role environmental health has during the preparedness and response phases of disaster management. Participants can be from the local, provisional, state, federal, international and private sectors.

The course is also relevant for other health and disaster professionals who require further knowledge of the role environmental health has in disaster preparedness and response.

### **Course Cost**

EHA member \$1650 (inc GST)

Student EHA member \$1155 (inc GST)

Non-members: \$1980 (inc GST)

Student non-members \$1485

### **Accommodation Options:**

Rydges Southbank Townsville Hotel:

<http://www.rydges.com/accommodation/townsville-qld/townsville/welcome/>

### **Registration Information**

Please visit <https://www.ehaqld.org.au/events/event/environmental-health-disaster-management-course-2018>

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