International Federation of Environmental Health
Asia-Pacific Regional Group

Course Brochure:

Managing Environmental Health in Disaster and Humanitarian Settings

18-21 August 2014

Ruang Sidang Faculty of Medicine
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Environmental Health in Disaster and Humanitarian Settings

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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[1]. 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[2].

Good environmental health disaster and humanitarian 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[3].

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.[4]

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[5].

About the Course

Environmental health, humanitarian and disaster professionals from across the world have a critical function in mitigating public health risks during a response to a disaster and humanitarian crisis. To address this need the Griffith University Humanitarian and Disaster Initiative, Environmental Health Specialists Association Indonesia (EHSAI), the Asia-Pacific Regional Group of the International Federation of Environmental Health (IFEH), USA Centers for Disease Control and Prevention (CDC), National Environmental Health Association (USA) and Aspen Medical have worked together to develop this course.

This course will identify the critical role you may have in mitigating environmental health risks from a disaster or during a humanitarian crisis. This includes the need to conduct assessments to identify and address key risks such as those relating to drinking water, shelters, overcrowding, 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 and humanitarian crisis 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 and humanitarian crisis 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.

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

Objectives

- Demonstrate how environmental health infrastructure and practices are central to disaster management and humanitarian activities
- Provide an overview of key environmental health infrastructure and how this can be affected after a disaster and during a humanitarian crisis
- Understand what should be considered to mitigate the environmental health risks
- Provide guidance on assessing, addressing and responding to environmental health impacts of a disaster and humanitarian crisis 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 and humanitarian settings. This course concludes with an exercise to apply the skills and knowledge attained during the course. A provisional program is at Attachment A.

Course Content

The course includes the following topics:

1. Disaster and Humanitarian Crisis Management
   - Discuss plans, systems, guidelines and programs that guide the role of environmental health during the disaster management cycle and a humanitarian crisis
   - Identify and discuss preparedness, response, recovery, and mitigation resources for environmental health
   - Outline the structures and parameters in which environmental health may function during a disaster or humanitarian crisis
   - Discuss environmental health preparedness and response systems

2. Drinking Water
   - Water issues faced in disasters and humanitarian crisis
   - 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

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
   - 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 Assessments
   - Identify exterior and interior building components
   - Explain assessment preparation and process for buildings
   - Identify building-related health hazards
   - Exercise recovery and reoccupancy evaluations
   - Identify preventative actions to improve building resiliency

9. Responder Safety
   - Identify common hazards that may be encountered during a disaster or humanitarian crisis.
   - How disaster related hazards can affect your health
   - Health and safety precautions that should be taken during a response

Target Audience
Environmental health specialists, professionals and students who plan to broaden their understanding of the role environmental health in disaster and humanitarian settings. 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 management and humanitarian planning and response.

Course Duration
4-days

Course Cost
IDR 200000 or AUD$20 for students (valid student ID card required)

IDR 1000000 or AUD$100 for low income countries (eg Indonesia, Central Africa)

IDR 4000000 or AUD$400 for medium income countries (eg Singapore, Japan, South Africa)

IDR 8000000 or AUD$800 for high income countries (eg UK, Australia, Europe and USA)

The International Federation of Environmental Health will decide on the status of income for each member based on the index below:
http://en.wikipedia.org/wiki/Human_Development_Index

Registration includes morning/afternoon teas, lunches, course materials and Certificate of Completion.

Onsite payment is available for Indonesian participants who have registered.

Accommodation Options
To be advised.

Registration Information
Local participant (Indonesia) please contact Hita Suryadhi via e-mail hita_suryadhi@yahoo.com

International participant please contact Dr Davey via e-mail peter.davey@griffith.edu.au

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For Further Information
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Attachement A – Provisional Program

Day 1 – Monday 18 August

9.00am	Welcome and Introductions
10.00am	*Break*
10.30am	Humanitarian Standards
1.00pm	*Lunch*
2.00pm	Disaster Arrangements
3.00pm	*Break*
3.30pm	Environmental health in disaster and humanitarian settings
4.30pm	Close

Day 2– Tuesday 19 August

9.00am	Communicable disease and risk management
9.45am	Non-communicable diseases in disaster and humanitarian settings
10.30am	*Break*
10.45am	Drinking Water
1.00pm	*Lunch*
1.30pm	Wastewater
2.45pm	*Afternoon Tea*
3.00pm	Food safety
4.00pm	Review of Day
4.30pm	Close

Day 3 – Wednesday 20 August

9.00am	Solid Waste and Hazardous Materials
10.30am	*Morning Tea*
10.45am	Vector Control
1.00pm	*Lunch*
1.30pm	Evacuation centres and shelters
4.30pm	Close

Day 4– Thursday 21 August

9.00am	Building Assessments
10.30am	*Morning Tea*
10.45am	Exercise
12.30pm	*Lunch*
1:30pm	Award Ceremony
3.00pm	Close