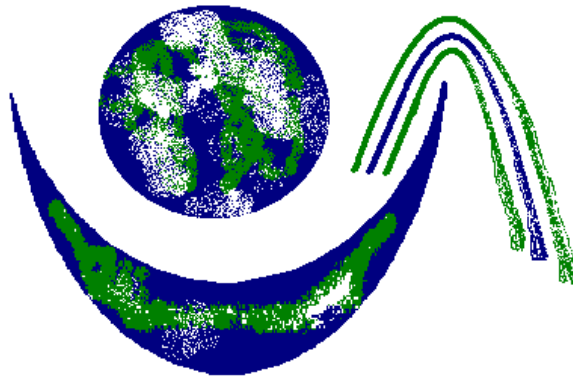


Training for health professionals



Climate-TRAP

Module – *Flooding*

Outline training

- Objective
- Definitions
- Effect climate change on flooding
- Specific information for flooding
 - Health effects
 - Current situation
 - Future situation
 - Actions needed
- Summary

Training objective

- To learn how to be prepared for changes in public health due to climate change
- Take home message
 - Health impact
 - Mitigation and adaptation
 - Preventive measures on individual & community level

Definitions

- **Mitigation** = reducing the severity of climate change (reducing greenhouse gas concentrations)
- **Adaptation** = preparing for change (adjusting our systems to reduce harm from climate effects)

Introduction

Flooding

River

Seacoast

Influential factors

Climate change

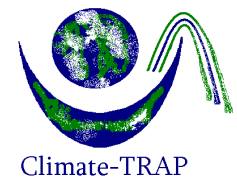
Population growth

Increased wealth

Shift in land use

Demographic shifts

5

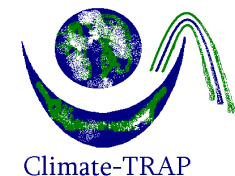


River, Coastal Flooding & Flash Floods

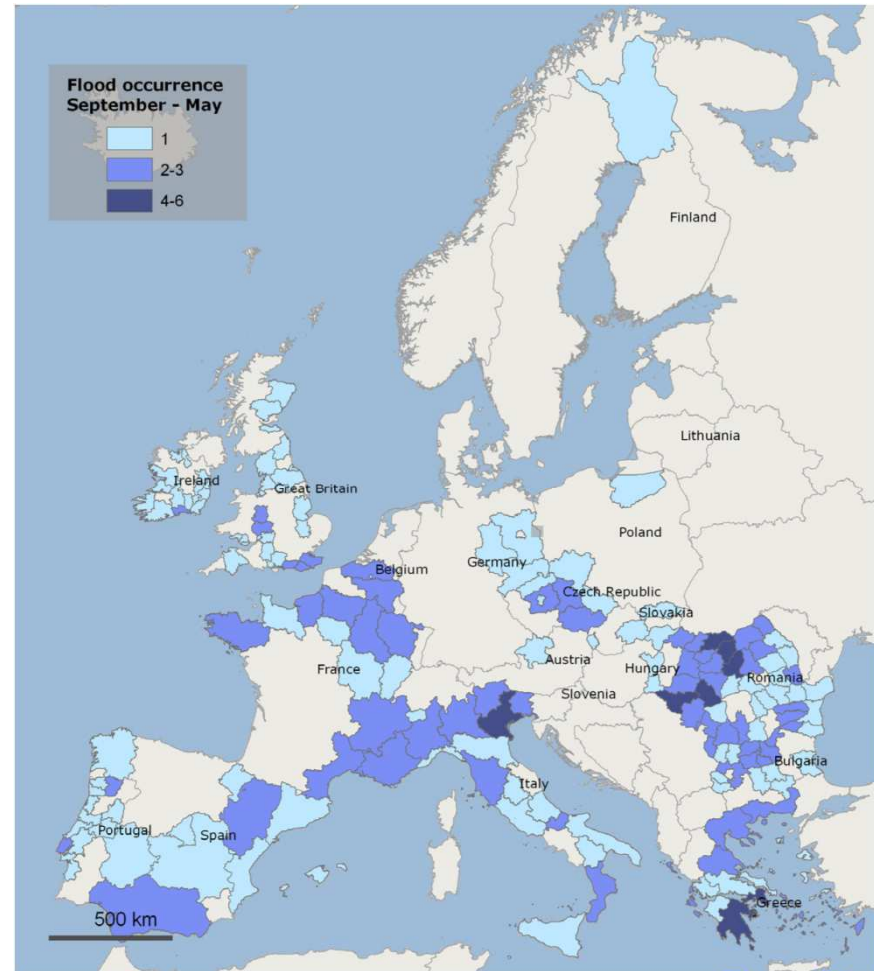
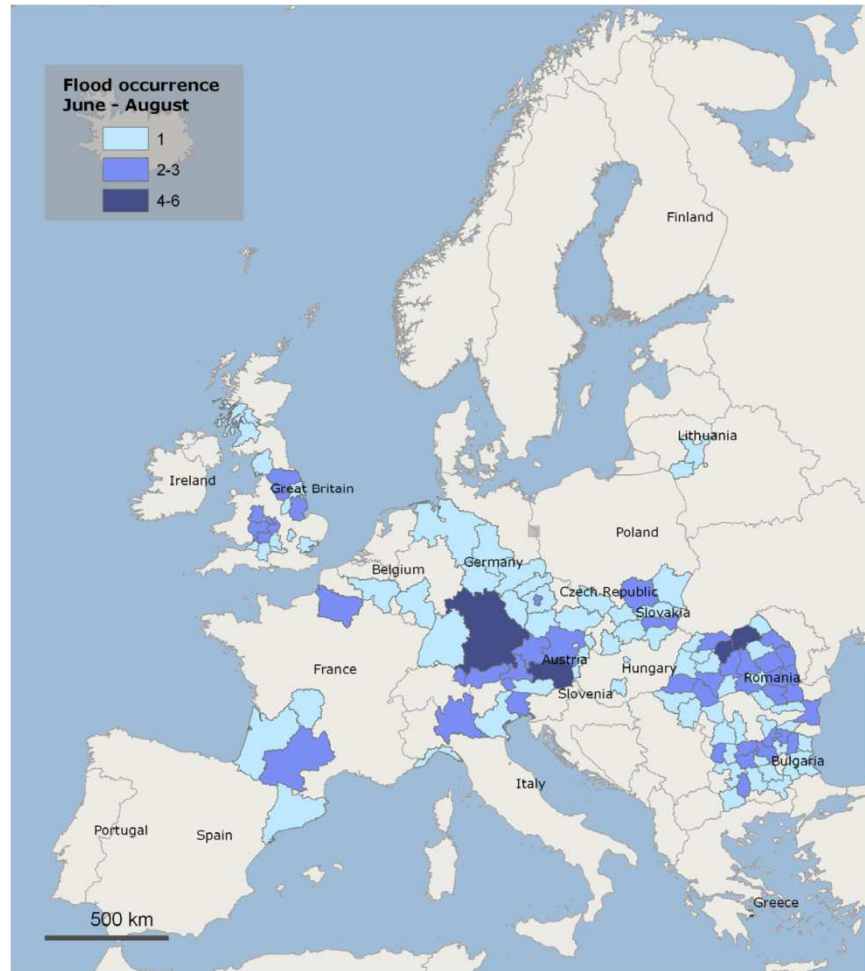
- Few direct deaths
- Full effect in terms of mortality and morbidity not known
 - Accidents – drowning, electrical
 - Contamination of drinking water
 - Rise in waterborne infections
 - Exposure to toxic pollutants
 - Psychological consequences
 - Disruption, injuries & deaths
 - Late effects include stress & mental health problems
- Food and water safety concerns
- Effects on health and social service delivery



UK floods of summer 2007



Flood occurrence



Flood occurrence from 2000–2009 recorded in EM-DAT, per month and admin1. Source: EM-DAT

Climate change

Current impact assessment

Trends

Health risks/impacts of an extreme weather event are a function of:

Severity: how challenging are the event's conditions (e.g., precipitation amount)

Duration: how long are the extreme conditions experienced

Surprise: how much advance warning was available for the event (e.g., days, hours, minutes)

Climate change

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Climate change

Population factors affecting the risks/impacts of extreme weather events include:

Size: how many people does the event affect

Age: the young and old are less able to help themselves in an extreme weather event

Health status: poor health limits individuals' response ability

Wealth: poverty can limit the types of preparation actions and responses that can be considered, it can also affect exposure (e.g., housing stock)

Health effects

- Direct health impacts
 - Morbidity
 - Mortality
 - Both are observable and clearly attributable to the physical impacts of the event:
 - Mental health impacts (Post Traumatic Stress Disorder-PTSD, depression)
 - Delayed onset and recognition can lead to impacts being missed in an event summary
 - Potential to adversely affect productivity
 - Potential for severe health and quality of life impacts

Health effects

Mental health effects

Caused by personal loss, separation, poor health, low socio-economic status

Increased risk of anxiety or depression

Health effects

Physical health effects

- Drowning
- Trauma
- Heart attacks

Between 1998 and 2009, there were 1126 fatalities due to floods in Europe

Impact on health care

- Disruption of health care services
- Increased referrals in year following flooding
- Increased demand on mental health professionals

What actions are needed?

Capacity needs

- Early warning systems should be in place
 - After flood: medical support
administrative support
financial support
transport capacity (for aid, refugees)

What actions are needed?

- Capacity needs personnel
 - Trained medical professionals
 - Trained environmental experts
 - Housing experts
 - Psychologists
 - Social workers
 - Public health experts