

Emergency management

Improving the resilience of communities to flooding hazards



Emergency management

Planning for emergencies is challenging. During a flood emergency responders are faced with critical decisions on which the safety of the population and infrastructure might depend. Having a robust and well-tested emergency management strategy on which to base these decisions can be a valuable asset to the emergency services.

Modern technologies can be used to help formulate emergency management plans. HR Wallingford is advancing and applying these technologies to enhance flood emergency planning, aid decision-making and support allocation of resources during a flood.

Managing consequences

- > Assess flood risk to people, vulnerable groups, businesses and critical infrastructure
- > Advise on appropriate flood protection and resilience measures
- > Testing of flood products and building materials

Planning for evacuation

- > Calculate how much time the population has to evacuate before the flood wave arrives
- > Assess whether it is safer to try to evacuate the population or to advise them to 'stay put'
- > Evaluate how long the population would take to reach safety
- > Locate the safest evacuation routes

Expert advice

- > Assess when the rescue teams can safely enter the affected area
- > Advise on which type of rescue is appropriate
- > Evaluate how to effectively deploy rescue resources
- > Advise on where to allocate manpower and equipment to maximise the effectiveness of the response
- > Assess potential injuries and fatalities

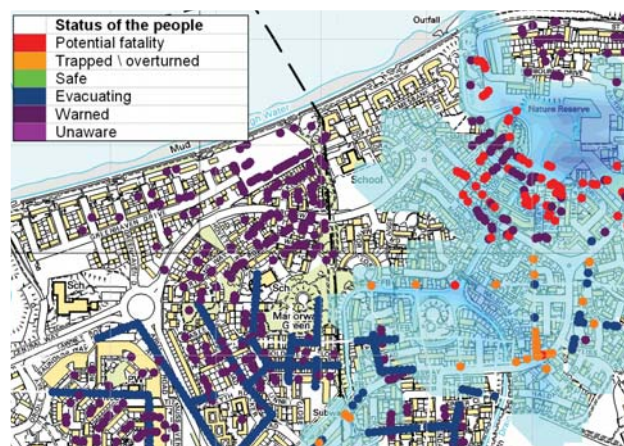




Image courtesy Environment Agency www.petersmith.com



Emergency plans for floods and reservoirs

- > Assess the effectiveness of emergency plans
- > Structure plans to conform to the government guideline
- > Apply available tools for enhancing emergency plans

Working with national and international experts in flood incident management, we have developed tools and methods that:

- > Simulate full-scale evacuation
- > Evaluate evacuation times
- > Optimise the choice of evacuation roads and allocation of safe havens
- > Allocate flood rescue teams and resources
- > Assess the consequences of flooding to people

The technologies developed and applied by HR Wallingford can also be used to advise on the management of other disasters, such as earthquakes, tsunami and major fires.

Image courtesy Mr Young, Boscastle



Image courtesy Geodesign Barrier

HR Wallingford is an independent engineering and environmental hydraulics organisation. We deliver practical solutions to the complex water-related challenges faced by our international clients. A dynamic research programme underpins all that we do and keeps us at the leading edge. Our unique mix of know-how, assets and facilities includes state of the art physical modelling laboratories, a full range of numerical modelling tools and, above all, enthusiastic people with world-renowned skills and expertise.

