

# *CE case studies 2011*

**Weather Hazard** - Hurricane Katrina – Aug 2005. In the Caribbean Sea hitting New Orleans

Causes: evaporation from warm sea

Effects: 100,000 homeless, 200 kmph wind, 9 m storm surge, 80% of city underwater, Caused fires, Contaminated fresh water, 1300 killed, 500,000 refugees, No food, power, Looting / crime, Poor sanitation, Businesses / oil refineries damaged, Chemical factory explosion, Aid slow to arrive, No disaster drills practised, Poor information / advise, Future risk with global warming

**Flood** - Bangladesh 1998

140 million live on flat floodplains only 6 m above sea level. Ganges and Brahmaputra Rivers flood leaving silt, which is fertile, so popular area to live and farm. River flooding from seasonal Monsoon rain / snow melt from Himalayas / Tidal surge from cyclones in the Bay of Bengal.

Causes: Deforestation, Global warming, Urbanisation

Effects: 70% of country underwater, Some areas flooded for 3 months, Famine, 2,500 people killed, 100 million cattle died, Infrastructure destroyed – no roads, rail, schools, hospitals, airport, 25 million homeless, No power supply, Polluted drinking water – cholera, dysentery

Aid / help: Million tons of grain imported by Charities / MEDC's / volunteers, Medical care / water purification tablets / mobile medical teams, Educate about dirty water, Flood shelters built, Forecasting / prediction, Loans from World Bank

**National Park** - Lake District – beautiful coastal scenery and protected wildlife / environments / habitats

Conflict: **Locals vs. tourists:** noise, parking, litter, gates open, etc.; **Farmers vs.–tourists:** gates open, pets scare sheep, trespassing; **Conservationists vs. tourists:** trampling, picking rare flowers, walking off footpath, scaring animals in breeding seasons; **MOD vs. tourists:** noise or firing ranges, dangerous areas

Sustainable development: Honey pot sites control problems and bring in economic benefits; Traffic calming solution – park & ride; Guided walks to keep people on the correct paths and educate them; Information centre and wildlife ranger to educate public about how delicate the wildlife and habitats are; Visitors centre income for park; Leaflets / posters / signs / countryside code; Volunteers groups repair paths; Reseeding of vegetation to stop soil erosion

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## **Volcano** - Montserrat, Caribbean 1995 to present

Effects: Fires, Ash covering 75% of island, Wildlife / habitats lost, Coral reefs dies due to ash, Farming industry destroyed, Tourism lost, Housing destroyed, 25 people died, Evacuate 10,00 people from island, Hospital destroyed, Water polluted / sewer system damaged

Response: Monitor volcano, Hazard map / safe zones drawn up, International aid to help with rebuilding infrastructure, Repatriation to UK

## **Earthquake** – Kobe 1995, 6.8 on the Moment magnitude scale MMS

Effects: lasted 20 seconds, killed 6,434 people, cost \$100 billion, 200,00 buildings destroyed, port damaged, fire, panic, no electricity

Response: volunteers helped, future buildings further apart, suspension and reinforcing for buildings, earthquake shelters built, emergency food & water supplies, alarms, monitoring, practice drills

## **Economic activities**: Nike USA

Headquarters (HQ) in MEDC because better technology, higher skilled workers, better transport, big / rich markets, better infrastructure

Factories / Manufacturing in LEDC because low wages, cheap land, cheap raw materials, fewer health & safety guidelines to follow, few pollution restrictions