

Case
Studies –
Take 10

Year 11
Revision

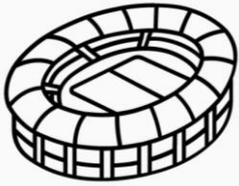
Hurricane Katrina– Take 10



On 25th August 2005, Hurricane Katrina hit the USA, particularly damaging the city of New Orleans in Louisiana.



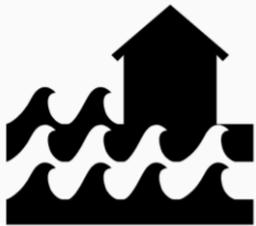
Hurricane Katrina measured as a category 5 hurricane on the Saffir-Simpson scale, and at the time was one of the costliest hurricanes ever.



The Superdome American Football Stadium was designated as a shelter for anyone who could not evacuate from New Orleans.



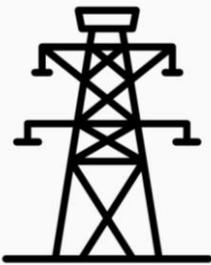
Flood barriers built around the city were designed to reduce the impact of storm surges



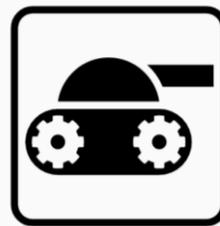
Hurricane Katrina's 6m high storm surge overwhelmed the city's flood defences.



Hurricane Katrina caused \$160 billion worth of damage to property.



2 million homes were left without an electricity supply as power lines were blown down in very high winds.



3,000 members of the US military returned from Iraq to help distribute food and water to those who had lost their homes (short term response).



The Federal Emergency Management Agency (FEMA) deployed refrigerator trucks with emergency supplies, but there were not enough for everyone who needed them (short term response)



The US government spent over \$800 million on rebuilding flood defences which had been damaged or destroyed by Hurricane Katrina.

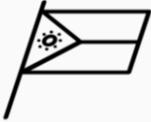
Typhoon Haiyan – Take 10



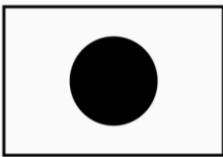
Typhoon Haiyan made landfall on the east coast of the Philippines on 8th November 2013, mainly affecting the city of Tacloban.



Typhoon Haiyan was one of the strongest cyclones on record, measuring as a category 5 storm on the Saffir-Simpson scale.



As the Philippines is an emerging country with limited technology, Japan, a developed country, assisted in tracking the typhoon using satellites.



The government used the Public Storm Warning System to advise people about the risks in each area and whether they should evacuate.



1,948 schools were destroyed by Typhoon Haiyan, leaving children without an education.



3 million people lost their homes, and 2.7 million of them were not able to access an evacuation shelter and were forced to live outside.



500,000 homes were damaged or destroyed; the government estimated the cost of rebuilding would be over \$5.8 billion.



50,000 solar powered lanterns were provided to people who had had their electricity supply cut off (short term response)



Mangrove trees have been replanted along the coastline to act as a natural flood defence in the event of a future tropical storm (long term response).

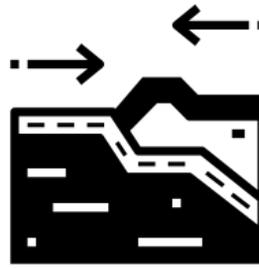


The Philippine government launched the 'Build Back Better' programme. Buildings were rebuilt to be stronger and more resistant to tropical storms.

Japanese Earthquake – Take 10



On the 11th March 2011 Japan was hit by a 9.0 magnitude earthquake (the strongest ever recorded in Japan)



The earthquake was caused by a convergent plate boundary where the Pacific Plate subducted under the Eurasian Plate



The earthquake caused a tsunami with waves up to 10 meters high, travelling 10km inland



The Earthquake was shallow, only 30KM below the seabed.



Over 17,000 people lost their life because of the tsunami; more than half of the victims were over 65 years old.



Over 127,000 buildings collapsed, and 1.2 million were severely damaged; the estimated cost of repair was \$300 billion.



The earthquake cut the power to several nuclear power stations, causing a meltdown at Fukushima; 140,000 people had to be evacuated.



The Pacific Tsunami Warning Centre warned coastal countries round the Pacific and told people to evacuate.



130,000 people were displaced. In Sendai tens of thousands of prefabricated temporary houses were set up to provide shelter.

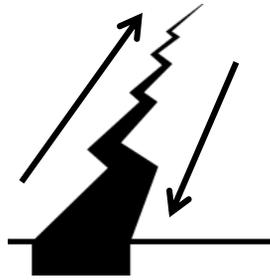


In February 2012 the government set up an agency to coordinate rebuilding efforts. The restoration in some areas is expected to take 10 years. In 2015 work on a new seawall had started.

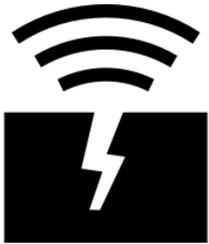
Haiti Earthquake – Take 10



On the 12th January 2010 at 4:53 pm Haiti was hit by a 7.0 magnitude earthquake.



The earthquake was caused by a conservative plate boundary with the North American and Caribbean plate.



The epicentre was 25km south-west of the capital Port-au-Prince and the focus was very shallow, only 13km below the surface.



Aftershocks of magnitudes between 5.5 and 6.0 occurred in the days following the earthquake.



The earthquake was one of the most destructive ever to occur; there were 316,000 deaths and 300,000 injuries.



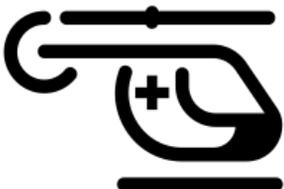
Around 3 million people were affected. 1.5 million were made homeless when more than 180,000 homes were destroyed.



All 8 hospitals collapsed and 5000 schools were severely damaged or destroyed. All this damage created 19 million cubic metres of rubble.



A cholera epidemic began 10 months after the earthquake, killing over 8000 people and infecting 6% of all Haitians by 2013.



Haiti was unprepared and could not respond adequately. Haiti relied on aid from overseas, including the UN and USA.



\$4.5 billion was pledged from countries around the world. The World Bank cancelled Haiti's debt repayments for 5 years. However, by only half of the money pledged reached Haiti.

India – Take 10



India is an emerging country located in Asia. India has a population of 1.36 billion, the second largest (after China).



India has a fast growing economy, for the past two decades it has grown by 7%. India's economy has been boosted by FDI.



India attracts TNCs because of its increasingly skilled labour force, low labour costs and economic growth. Outsourcing is common in India.



India's towns and cities are growing because of rural-urban migration and natural population increase.



Between 2001 and 2011 female literacy rate improved from 53.7% to 65.5%, however, only 1/3 of working age women have jobs.



13 of the world's top 20 polluted cities are in India. Air pollution is the 5th biggest cause of death in India.



The number of rivers defined as 'polluted' rose from 121 to 275 between 2010 and 2015.



India is the world's third largest emitter of carbon dioxide, after China and USA; the majority of India's electricity is produced by coal.



India is one of a group of five emerging countries that make up the BRICS (Brazil, Russia, India, China and South Africa).



India is a member of the influential G-20, the group of major developed and emerging economies.

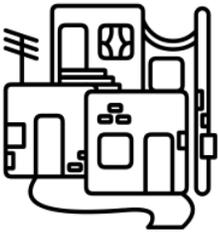
Mumbai – Take 10



Mumbai has a naturally deep harbour and its located on the west coast, facing important markets in the Middle East and Europe.



Mumbai is the largest city in India, between 2001 and 2011 the population grew by 3.4 million. This was because of natural increase and rural-urban migration.



Dharavi has a population of 1 million, it is also home to 5000 small-scale businesses and 15,000 single-room factories.



Working conditions in Mumbai are poor, however, unemployment rates in Mumbai are lower than other parts of the country.



There are over 1.8 million cars in Mumbai meaning people prefer to travel by rail. This has put a strain on the railway system.



Lack of sanitation is a challenge in Mumbai, in Dharavi over 500 people share 1 latrine and water is rationed for slum residents.



The Gorai Garbage site closure is a top-down project where a landfill site was turned into a public park; the site also uses methane-capture technology.



The Mumbai mono-rail top-down development scheme aims to solve traffic congestion. Tickets are 11 rupees but currently only goes through industrial sectors and not the old city.

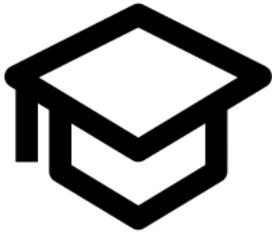


SPARC, a bottom-up scheme, has provided 800 community toilet blocks; monthly permits are very cheap at 25 rupees.



Agora Microfinance, a bottom-up strategy, provides loans to people living in slums. The interest rate on these loans is high at 25%.

Birmingham – Take 10



Birmingham is a central city in West Midlands. It has good rail, road and air networks. It is also home to 3 universities.



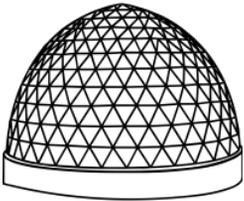
The inner city areas of Birmingham were redeveloped during the 1970s through Comprehensive Development Areas (CDAs) scheme.



Many international migrants have moved to the inner city areas. Ethnically diverse areas have a younger population younger and bring a greater cultural mix.



Index of Multiple Deprivation uses statistics of income, employment, health, crime and environment to measure quality of life. Inner city areas of Birmingham have higher deprivation levels.



De-centralisation in Birmingham began when shopping centres began to be built in the suburbs. The Bullring was built in the CBD in response.



Gentrification (process where older parts of the city become culturally desirable) and studentification (gradual change of an area caused by students) has changed Birmingham.



Longbridge and Eastside are examples of regeneration and rebranding.. These have improved the urban environment but also increased property prices.



Recycling, green transport, green spaces and eco-housing have improved the sustainability of Birmingham.



Birmingham is interconnected with surrounding rural areas; commuting links, produce links, water supply and space for urban growth.



Rural diversification has occurred in rural Worcester. This is the development of methods of income generation that are in addition to, or instead of, traditional farming.