Case Study, Coastal Management: Lyme Regis, Dorset, UK

Place specific info:

- ✓ Lyme Regis is a small town on the South coast of the UK and makes up part of the stretch of coastline called the: Jurassic Coast. It is located in South West Dorset.
- ✓ It is an unspoilt seaside resort and fishing port on the historic harbour known as The Cobb.
- ✓ It is surrounded by beautiful coastlines, which are World Heritage Sites famous for fossils.

Opportunities at Lyme Regis

- Tourism is Dorset's biggest industry.
- This includes: recreational fishing, fossil hunting, boat trips, water sports like windsurfing, sailing and kayaking, beach trips, boat trips, village shops, fudge shops, museums, information centres for schools and families etc.
- The tourism industry there is made up of a diverse range of small and medium sized businesses/enterprises (SME's).
- Meeting the **demands** of tourists is a challenge, which has to be balanced with the environment and community interests as well.
- The local economy **depends** on tourism as a major source of **income** and **jobs**.
- **37,500** people are **employed** directly and indirectly in the tourism sector in Dorset, with **65%** of those working in a coastal area. This includes people who work in: restaurants, snack bars, night clubs, hotels, caravan parks, museums, art galleries, travel agencies, tour operators and sports and recreation providers.
- The Dorset coast **generates £800 million** per year most of that comes from overnight stays, buying food and drink and entertainment and shopping.
- There are both **natural attractions** and **built attractions** in the area.
- Built attractions in Dorset include: Sea Life Park (Weymouth) 220,000 visits per year, Swanage Steam Railway 140,000 visits per year, **Poole Pottery 1,000,000 visits per year**, Bovington Tank Museum 121,535 visits per year.
- Natural attractions include the **unspoilt beaches** so **water cleanliness standards** have to be high in order to keep attracting people to do sailing, windsurfing etc.
- In Lyme Regis there are many events such as: April's Fossil Festival, which showcases the Jurassic Coasts most famous rocks, May's Jazz and Blues Festival, August's Regatta, Summer closes with a carnival and Autumn opens with Guitars on the beach, in November effigies burn on a beach bonfire.
- More fossils are released from the cliffs when there is a landslide so there is some benefit to tourism when the landslides. 500 to 1000 people arrived within hours of a landslip trying to find rare fossils locked in the hillside. Some were even swimming fully clothed. They thought they could make money from it.

Hazards of Lyme Regis:

- Rapid rates of coastal erosion and landslides e.g. the old road from Charmouth to Lyme Regis which ran across the top of the cliffs above the town
- Landslides/landslips
- Lyme Regis is built on a layer of **limestone**, which is **very solid**. On top of that layer are slippery **muds, clays and sands,** which **slide** over the limestone layer to form the landslides. These are all types of sedimentary rocks.
- The **sea erodes** the **cliffs** at the bottom of the land, causing it to become **unstable** and slip even further.
- The cliffs to the east of the town were prone to landslides especially after rain because the muds and clays were saturated with water. This area was popular with fossil hunters.
- The beach was being eroded away.
- The drainage system is inadequate to cope.
- Houses, buildings and roads become damaged as the landslips towards the sea.
- Black Venn is the largest and most active coastal landslide in Europe!
- Nine of 60 Monmouth Beach chalets have been demolished since a landslip in January 2013.
- In May 2008, about 1,300ft (400m) of cliff slipped between Lyme Regis and Charmouth, exposing an old landfill site (where rubbish is deposited)

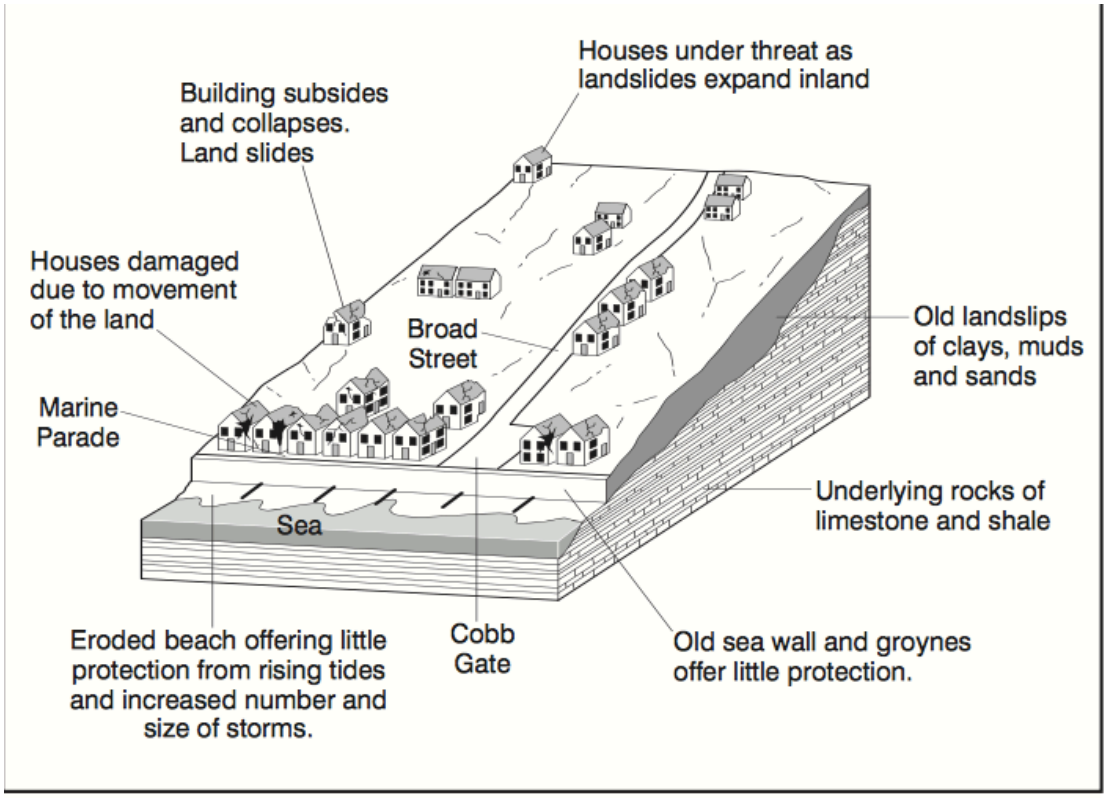

Figure 2: **The processes that make Lyme Regis unstable**

Scan me

Management of Lyme Regis:

- The management plan has been divided into 4 zones and phases, East Cliff, Monmouth Beach, The Cobb and The Harbour to Cobb Gate.
- More than £35 million has been spent since 1994 to prevent coastal erosion.
- It was done to protect homes, roads and infrastructure from coastal erosion.
- The work has secured 390 metres of coastline between Church Cliff and East Cliff for the next 50 years. 480 homes have been saved from damage or loss of access.
- Major utility pipes and cables that would have otherwise been destroyed by ground movement are protected.

Problems:

- Expensive for such a small community.
- The protection will only last approximately 50 years. They might have to spend this amount of money again. There will be an expectation that they should continue to defend the region but the money could be spent elsewhere so they could just accept the fate of the town now, relocate everyone and redistribute money to other projects.
- Sale of houses and businesses on the sea front after 50 years could be difficult.

Strategies:

- **Phase 1**: Built a new sea wall and promenade with rock armour east of the mouth of the river Lim, finished in 1995.
- **Phase 2**: Work started in 2005 ended in 2007 and cost £17 million. Protection to the sea front and stabilise the land immediately behind it, removal of old wooden groynes, replaced by big stone groynes. The beach was replenished with sand and shingle to absorb wave energy and protect the sea wall and sea front from erosion. Rock armour/rip rap added to the end of The Cobb harbour. Drainage improvements and weighing down of front of the cliff with soil nailing and steel piles in the park.
- **Phase 4:** Started April 2013 and the area was officially open on 17th June 2015. Built a 390metre stretch of sea wall in the eastern part of Lyme Regis. Slopes at Church Cliff and East Cliff were stabilised. £19.5 million was spent on this phase, and it was deemed the 'largest and most complex' coastal protection schemes in England for years by the Environment Agency.

Benefits:

- Long-term protection against destructive coastal erosion and landslips.
- More sand and shingle on the beach. Better for tourism.
- A new promenade along the seafront. It will be possible to walk along the whole beach even at high tide. Calmer conditions for boards in the harbour and bay.
- Better access to the public gardens, including ramps for people using wheel chairs and prams.
- Improvements to roads. A more secure future for the town's people and businesses.

Types of 7 mark exam questions for this topic:

- For a named area you have studied, describe and explain the **opportunities** of a coastline.
- For a named area you have studied, describe the **hazards** of a coastline.
- For a named area you have studied, describe and explain the **management** of hazards of a coastline.