

Edexcel IAL Geography

Coasts

Glossary of Definitions



Abrasion - A form of erosion where loose material and sediment 'sandpapers' the walls and floors of the river, cliff or glacier. Also known as attrition.

Backshore - The upper beach closest to the land, including any cliffs or sand dunes.

Bar - A section of sand caused by deposition. They join two sides of a bay together, creating a lagoon behind the bar.

Beach Morphology - The surface shape of the beach.

Beach Nourishment - The addition of sand and sediment to an eroding beach by humans. The new material will be eroded by the sea which saves the cliffs or sand dunes from erosion and recession.

Coastal Recession - The retreat of a coastline due to erosion, sea-level rise or submergence.

Concordant Coast - A coastline where bands of alternate geology run parallel to the coast.

Corrasion - A form of mechanical erosion where material and sediment in the sea is flung at the cliff-face as waves break against it, this breaks up the rocks making up the cliff.

Corrosion - The weak acid in seawater and some types of seaweed react with particular rock minerals, causing erosion and weakening.

Dalmatian Coast - A concordant coastline with several river valleys running perpendicular to the coast. These valleys become flooded due to sea levels rising and produce long islands and inlets.

DEFRA's 1:1 Cost-Benefit Analysis - The evaluation of a coastal town's economic value compared to the cost of the management required.

Discordant Coast - A coastline where bands of alternate geology run perpendicular to the shore.

Dynamic Equilibrium - A system where its inputs and outputs are in balance. Short term changes can affect this balance, negative feedback loops help to take the system back to dynamic equilibrium.

Emergent Coast - A coastline that is advancing relative to the sea level at the time.

Estuary - The point where the river meets the ocean, often muddy or silty. Sometimes estuaries become exposed at low tide or hazardous to traverse in a boat due to sandbanks.

Eustatic - Global changes to sea levels.

Fetch - The length of water over which the wind has travelled.

Fjord - Long narrow inlet of sea water which is between steep mountains. They are created when sea levels rise relative to the land, flooding coastal glacial valleys.

Foreshore - The lower part of the beach covered twice a day at high tide (the part of the beach that receives the most regular wave action).



Freeze Thaw - A form of physical sub-aerial weathering where water freezes in the cracks of a rock, expands and enlarges the crack. This weakens the rock overtime leaving it more open to erosion.

Geology - The physical structure and arrangement of a rock.

Glacial Erosion - The removal of loose material by glacier ice, involving plucking, abrasion, crushing and basal meltwater. (necessary in the formation of Fjords).

Grading - The layering of sediments based on their size.

Groyne - A form of hard-engineering. Low-lying concrete or wooden walls, constructed perpendicular to the seafront and run out to sea. They encourage the trapping of sediment to reduce erosion caused by longshore drift or by winds.

Hard Management - The use of concrete structures to reduce or halt the recession of a coastline. Includes: Groynes, Sea Walls, Rock Armour.

High-energy Environment - A coast where wave action is predominantly large destructive waves, causing much erosion.

Hydraulic Action - The pressure of compressed air forced into cracks in a rock face will cause the rock to weaken and break apart.

Integrated Coastal Zone Management (ICZM) - Large sections of coastline (often sediment cells) are managed with one integrated strategy and management occurs between different political boundaries. It usually follows a holistic approach and takes into consideration different players.

Impermeable - A rock that does not allow water to pass through it.

Isostatic - A local change in sea level due to a change in local coastline or land height.

Littoral Cell - An area of coastline which has all sediment processes occurring sources, transport and sinks. A littoral cell is not a closed system.

Longshore Drift - The transportation of sediment along a beach. Longshore Drift is determined by the direction of the prevailing wind.

Low-energy Environment - A coast where wave action is predominantly small constructive waves. Deposition usually takes place leading to beach accretion.

Mass Movement - Where there is a large downhill movement of material usually from a cliff-face. Here, the rock is often weak due to erosion and the movement is caused by gravity.

Nearshore - The area before the shore where the wave steepness and breaks before they reach the shore and then reform before breaking on the beach. It extends from the low-tide zone and then out to sea.

Permeable - A rock that allows water to pass through it.



Plant Succession - Change to a plant community over time due to adaptation to changing growing conditions (eg. sand dunes and salt marshes).

Ria - Narrow winding inlet which is deepest at the mouth, formed when sea levels rise causing coastal valleys to flood.

Rock Armour - Large rocks or concrete blocks, used as barricades to reduce marine erosion at the base of cliffs.

Saltation - A form of transportation where smaller sediment bounces along the sea bed pushed by currents. This sediment is too heavy to be picked up by the flow of the water.

Salt Marsh - In sheltered bays or behind spits, salt and minerals will build up. Vegetation may establish, further stabilising the marsh.

Sand Dune - A depositional landform, where sand and sediment build up around driftwood and accumulate over time.

Sea Wall - A hard-management coastal defense, where a concrete wall is built parallel to the seafront, to redirect the energy of waves away from sensitive cliffs or the edge of a coastal town.

Sediment Cell - Sections of the coast bordered by prominent headlands. Within these sections, the movement of sediment is almost contained and the flows of sediment should act in dynamic equilibrium

Sediment Budget - Use data of inputs, outputs, stores and transfers to assess the gains and losses of sediment within a sediment cell.

Shoreline Management Plan (SMP) - Identifies all of the activities, both natural and human, which occur within the coastline area of each sediment cell. They use this to recommend a combination of four actions for each stretch of coastline: Hold the Line, Advance the Line, Managed Realignment and No Active Intervention.

Soft Management - The use of natural materials and environmentally sustainable approaches to reduce coastal recession. Includes: Beach Nourishment, Managed Retreat, Sand Dune Encouragement.

Spit - A long depositional landform, formed from sand and shingle.

Subaerial Processes - The combination of mass movement and weathering that affects the coastal land above sea.

Submergent Coast - A coast that is sinking relative to the sea level of the time.

Till - Deposits of angular rock fragments in a finer medium.

Tombola - A spit joining mainland to an island.

Wave Quarrying - When air is trapped and compressed against a cliff which causes rock fragments to break off the cliff over time

