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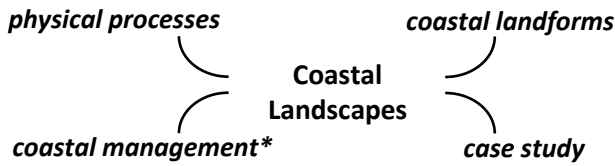
# Coastal Landscapes

## Soft Engineering

quiz



### The Big Picture



### Soft Engineering

Soft engineering coastal management involves adapting to a river and learning to live with it. The strategy involves working with nature. It is cheaper, but often less effective than hard engineering strategies.



### Beach Nourishment

#### Benefits

- This approach is relatively cheap.
- It retains the natural appearance of the beach.
- Beaches are a natural defence against erosion.

#### Costs

- Offshore dredging increases erosion in other areas and affects the marine ecosystem.
- Large storms require beach replenishment.



### Key Terms



**Beach nourishment** – The addition of new material to a beach.



**Reprofiling** – Changing the shape or profile of a beach.



**Dune regeneration** – Building up dunes and adding vegetation.



**Managed retreat** – Allowing erosion to occur as nature taking its course.



**Soft Engineering** – Managing erosion working with natural processes to help restore beaches and coastal ecosystems.



### Reprofiling

#### Benefits

- A cheap approach to coastal management.
- Simple and reduces the energy of waves.
- Maintains the natural appearance of the beach.

#### Costs

- Only works when wave energy is low.
- Reprofiling needs to be continuously repeated.



### Dune Regeneration

#### Benefits

- Dune regeneration provides a barrier between land and sea, absorbs wave energy, and cheap stabilisation.
- It maintains a natural-looking coastline.

#### Costs

- During regeneration, the land must be carefully managed so any new vegetation is protected from trampling.



### Managed Retreat

#### Benefits

- Managed retreat retains the natural balance of the coastal system.
- Eroded material encourages the development of beaches and salt marshes.

#### Costs

- People lose their livelihood, e.g. farmers.
- Communities and businesses need to be compensated.