

What factors shape coastlines?

Coast – the area where the land meets the sea

Shore - part of the coast

- region from the outer limit of the wave action on the bottom to the limit of the waves' direct influence on land

Beach – an accumulation of sediment that occupies a portion of the shore

Types of coasts

1. rocky
2. sandy
3. muddy

Primary coasts – form by the land-air processes (glaciers, deltas, wind-dunes, lava flows, faults)

Secondary coasts – form by marine processes (waves and tides)

Erosional vs. depositional coastlines

→ regions of high energy vs. low energy wave action

# Beach dynamics

Natural processes vs. human intervention

Onshore current – water moved by waves in the surf zone that flows along the beach → longshore transport of water and sediment

Sediments move from erosional areas to the depositional or accreting areas  
(average values ~ 30,000 dump-truck loads per year per beach)

**Rip currents** - form along a beach in areas of low surf and reduced onshore flow.

## **Coastal terminology**

Sea stacks – small rock islands that remain after irregular erosion of headlands

Bars – sand material deposited in offshore shallow waters parallel to the beaches

Barrier islands – bars above sea level accumulated by wind and ocean currents

Sand spits – bars connected to the shore at one end

Tombolo – a spit connected to an offshore Island

Salt marshes – low-lying protected coasts covered with grasses that experience periodic tidal flooding