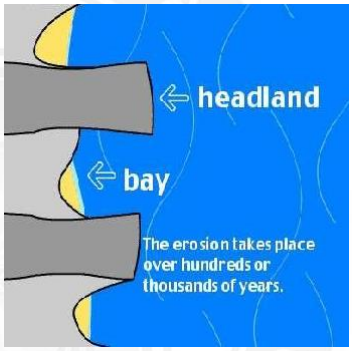
1.3 GEOLOGICAL WORK ASSOCIATED WITH OCEAN

Marine erosion:-

Marine deposition

1. Hydraulic action
2. Marine abrasion
3. Attrition
4. Corrosion / Solution



1. Hydraulic action

The processes of gradual breaking down of the rocks masses, due to the hydraulic stroke of water is known as hydraulic action.

2. Marine abrasion

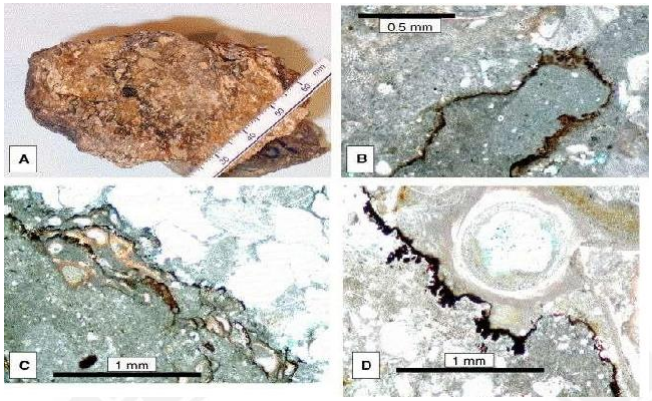
The process of wear and tear of the parent rocks of the shore due to the continuous impact of already broken fragments travelling with the advancing wave is known as abrasion.

3. Attrition

The process of mutual collusion between the rock fragments themselves is known as attrition which brings about further reduction in size of the individual rock fragments.

4. Corrosion / solution

It is the solvent action of the sea water which is particularly strong in environments where the chemical shore rocks is a vulnerable chemical composition.



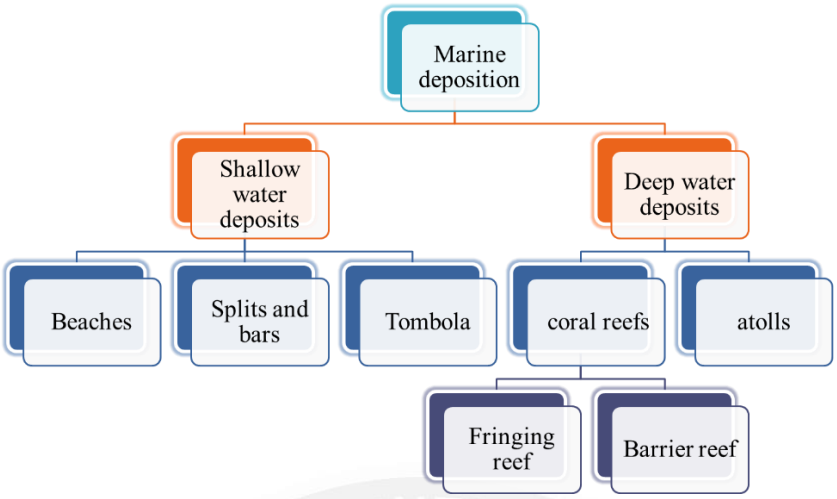
Features due to Marine erosion:-

1. Wave out cliff or sea cliff

The dashing waves and breakers gradually erode the land masses forming the coast rise to a steeply sloping strip is called wave out cliff.

2. Wave cut terrace and wave cut bench

A wave cut terrace is a shallow water shelf carved out of the shore rocks by advancing waves.



Marine deposition:-

1. **Shallow water deposits (Neritic)**

These include marine deposits laid down in the Neritic zone of sea extends from lowest tide to the continental slope.

i. Beaches:-

There are loose deposits made by sea waves and current nearby shore with eroded materials.

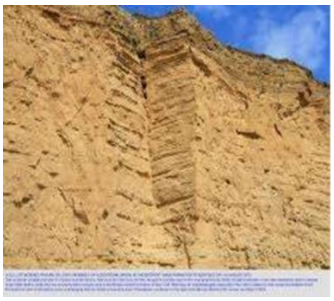
ii. Splits and Bars:-

Splits

This is a formation by heaped rock debris running IIel to shore line.

Bar:-

With more depositional activities, splits grow in dimension and connect themselves with coastal tracts, giving rise to bars which contain a portion of marine water.



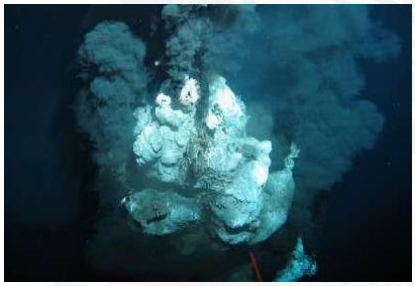

iii. Tombola

It is the form of bar that connects head land and island or Ore Island to another.


2. Deep water deposits (pelagic)

Fine muds and oozes are undergo the name of deep water deposits (pelagic)

Oozes: The oozes which form bulk of some of such deposits consists of small organisms and silt, clay particles in deep sea.




i. Coral reef:-

These are peculiar type of ridge – like marine deposits which have been formed due to accumulation of dead parts of certain types of sea organisms among which corals (calcium secreting organisms) are predominant and hence the name.



Its Types:-

a) Fringing reef

The reefs which occur in contact with the fringes of the existing islands and found totally encircling them are known as fringing reefs.

b) Barrier reef

They encircle the islands but necessarily lie off from them, leaving a strip of marine water in between the reef and enclosed island.

ii. Atolls

When a coral reef occurring more or less in the form of ring, encloses only a body of comparatively shallow marine water, it is known as an atoll.

E.g.:- Lakshadweep and Maldives in Arabian Sea.