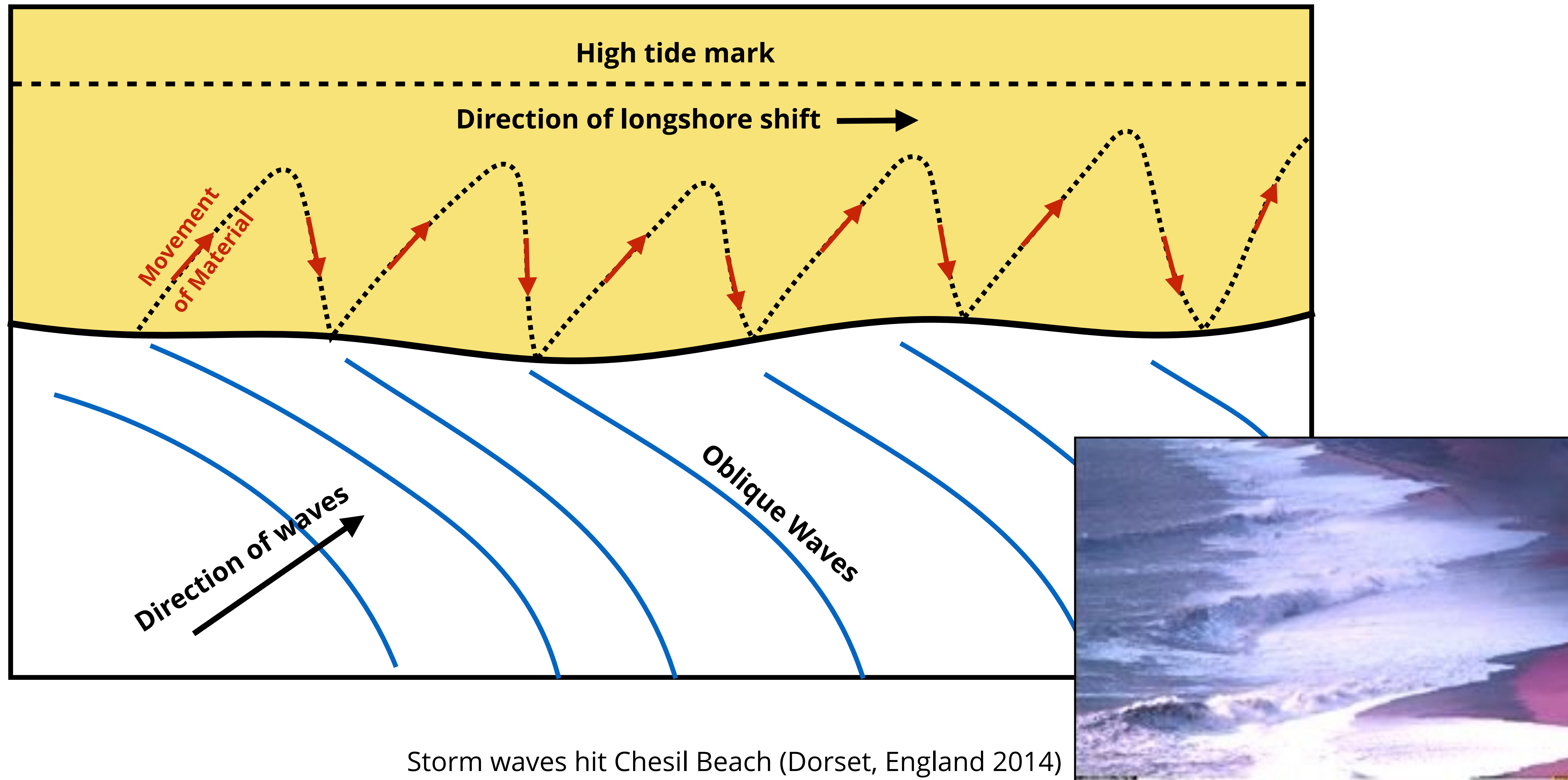


Beach erosion

Longshore transport



Coastal structures

- **shore-parallel structures**

- ▶ seawalls
- ▶ seadikes
- ▶ revetments
- ▶ artificial headlands
- ▶ detached breakwaters
- ▶ artificial reefs
- ▶ sea bottom protections (armouring)
- ▶ artificial islands

- **shore-normal structures**

- ▶ short and long groynes
- ▶ jetties
- ▶ harbour breakwaters

The most basic function of hard structures is:

- ▶ **intercept and dissipate the energy** of waves and currents and associated sand transport
- ▶ to protect the **shore against erosion**
- ▶ to protect the **shore against sliding** (bluffs, cliffs, dunes).