

NTS CRUISE 2007: THE SEA AND THE COAST

Introduction

- All around us and seeing coastlines.
- Why is it important, what is happening, what things we need to do

(1) Why important?

Pictures rather than lists

1. weather water vapour, gulf stream etc ocean circulation diagram
2. food: web for marine and marine dependent life, for humans food web diagram
3. sink: rubbish biodegradable and otherwise, CO 2 COs figure
4. water resources
5. resources under sea eg hydrocarbons oil and gas map
6. resources on sea: energy, waves and tides waves
7. making and fashioning the coast cliffs and sandy coasts
8. wildlife for its sake, in &/or dependent on sea sea bird cliffs
9. landscape and seascape
10. recreation swimming or boating

(2) What is happening? Oh dear it is a mess!

Diagrams and pictures

Trends positive

1. new land coastal accretion
2. greater knowledge identification new and important features eg cold water corals, sea bed mountains and continental movement maerl beds
3. beneficial use of resources eg energy, oil and gas offshore wind farms
4. any others??

Trends negative

1. related to global climate change: thermal expansion, CO2 release diagram, sea level rise diagram and storminess to land loss coastal erosion and threats to properties and to habitats coastal erosion photo
2. related to fishing: damage to habitats especially bottom from trawling and dredging sea bed photo, loss of species graphs of fish stock declines, unsustainable catches graphs of loss of species cf cod, impact of non target species photo of by catch/cetacean in net
3. related to other resource extraction: oil and gas, sand and gravel, energy: infrastructure debris on sea bed

Things that happen anyway

1. waves and tides waves
2. sea bed and sub sea bed activity causing tsunamis
3. rearrangement of continents and coasts tsunami effects Thailand
4. coasts change shape

(3) What needs to be done and how can it be achieved?

1. better fisheries management:
 - refugia for spawning areas and no take zones diagram
 - outright bans, catch limits, by catch restrictions, age/size restrictions description boards from an MPA Ooz
 - higher penalties
 - certification schemes
2. discharge controls: dumping at sea, runoff from freshwater and implications for more targeted use of fertilizers etc in agriculture tractor fertilizer spreading
3. systematic approach to renewable energy development and watch onshore implications diagram from The oceans??
4. solve the freshwater crisis through de-salination photo
5. more planned and managed approach:
 - MPAs principles: setting aside protecting and restoring/challenges of dynamics in space and time/progress in application eg marine and coastal national parks, Natura 2000 sites diagram of MPA and Natura map
 - Coastal zone management: natural units eg sediment cells cells diagram
 - Let nature take its course at the coast? Intervention to halt v. managed retreat v. leave it to nature photos Montrose, Nigg Bay, St Cyrus
 - Linking land coast and sea eg rivers and nearshore UNESCO diagram, eg bird cliffs and cliff bottom food source Orkney or Shetland or St Abbs bird cliff

Out of site out of mind therefore do anything there so raise consciousness of issues and need for action and support for continuing existing action