GS331 Oceanography Reading and Lab
Assignments for Week of 11/11/2002 - 11/18/2002

Since we will have a break next week due to Veteran's Day, complete the following reading assignments for Monday November 18 (i.e. the next time we meet)

A. Download the "Anderson and others, 2001" paper from the web site, read it and answer the questions below.
B. Download the "Komar, 1988" paper from the web site, read it and answer the questions below.
C. Download the “Komar, 1992” paper from the web site, read it and answer the questions below.

Read the Anderson and Others, 2001 paper and answer the following questions:

1. Why are coastal regions important to humans? What is their significance?
2. List and discuss all the effects that climate change has on coastal processes.
3. Why is it necessary for scientists to study past (ancient) climate and oceanographic conditions?
4. List and discuss three impacts related to sea level rise.
5. What may be a potential outcome of global warming with respect to storms in coastal regions.
6. How can scientific models be used to manage coastal areas?

Read the Komar, 1998 paper and answer the following questions:

1. Systematically list the processes of coastal erosion.
2. Draw a sketch and discuss the concept of "El Nino" in the Pacific Ocean.
3. How does El Nino effect relative sea level along the Pacific Northwest Coast?

    A. Why does sea level change during El Nino?

4. Draw a sketch and discuss the seasonal orientation of waves on the Oregon Coast during a "normal" year. How about during an El Nino year?

5. List 3 coastal effects that occurred in response to the 1997-98 El Nino event in the following locations:
    a. Port Orford
    b. Alsea Spit
    c. Cape Lookout State Park
    d. The Capes

6. What are the social costs associated with El Nino (atmospheric) influences on ocean processes along the Oregon Coast?

Read the Komar, 1992 paper and answer the following questions:

1. What is a marine terrace and how does it relate to the tectonic setting of Oregon?
2. Are all portions of the Oregon Coast currently being uplifted? subsiding? or stationary? Explain your answer and the spatial distribution of these processes.
3. At what times of the year does the Oregon Coast experience the highest wave-breaker activity? Why?
4. What is a “pocket beach” and how is sediment transported into or out of these features on the Oregon Coast?
5. Discuss the mechanisms of seacliff erosion on the Oregon Coast and the potential social costs associated with these processes.