


Tsunami Deposits



- ◆ Storms vs. Tsunami
 - Frequency/Magnitude
 - Source?
 - Event stratigraphy :
 - ◆ Identifying (EQ, Landslides, Storms)
 - Tsunami fine landward
 - Storms coarsen landward
 - Basinwide synchronicity
 - ◆ Dating (multiple methods)
 - ◆ Big Boulders (wave energy, inundation)

Tsunami Deposits (cont' d)

- ◆ Event Geomorphology
 - Ebb and flow channeling
 - Marsh/barrier alternate models (regions without marsh)
 - Sediment record (deposition and erosion)
 - ◆ Historical/Geological correlations
 - Mediterranean, Japan, China, etc.
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Tsunami Deposits (cont' d)

◆ Coastal Conservation (Reefs and Mangroves)

- Buffers?
- NGOs and conservation
- Record of past events
 - ◆ Freshwater isotopic record in coral (most storms)
 - ◆ Atoll lagoon coring
 - ◆ Deposition/erosion of reef




Seafloor Morphology

- ◆ Frequency/Magnitude
 - dating (Scarp diffusion, Scotia Margin, Industry Data)
 - Magnitude power law scaling on different margins
 - Landslides (erosional process)
 - Earthquakes (energy input)
- ◆ Sediment supply for landslides
 - Glacial margins and deltas
 - Sea level lowstands (slope deposition)

Seafloor Morphology (cont' d)

◆ Defining landslides

- Morphology- Is it *really* a landslide?
 - Populations of varied environments
 - Composite vs. discrete?
 - Classification scheme (slide vs. slump, etc.)
 - US West Coast seismic and multibeam (5 or 6 PhDs work!)
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Seafloor Morphology (cont' d)

- ◆ Onshore deposits tied with offshore events
 - Orphan deposits- source?
 - Big slides- tsunamigenic?
 - Examples- Grand Banks, PNG, Goleta, Lisbon (1755)?
 - ◆ Volcanic sector collapse
 - Canaries
 - Hawaii
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