Adapting to Shifting Tides: Science and the Political Implications of Coastal Change
Joint Penrose/Chapman Conference; Galveston, Texas, 14-19 April 2013

Acceleration of sea-level rise (SLR) in response to global climate change is occurring everywhere. Global SLR averages about 3 millimeters per year over the past several decades. The increased rate of SLR is exacerbated on a regional scale by decadal scale oscillations in sea level that are due to oceanic and atmospheric teleconnections, including ocean wave climate (wave height, period, and direction), oceanic currents, sea surface fluid exchange, and anthropogenic alterations in sediment supply to the shoreline. In turn, these perturbations influence wave climate and shoreline sediment delivery and distribution within deltas. These broad-scale environmental changes, including ecological influ- ences, on coastal change. Other major effects include cliff and bluff retreat, as well as coastal flooding, groundwater intrusion, and soil salinization, which may extend tens of kilometers inland from the shoreline. Severe storms (e.g., cyclones and hurricanes) result in the formation of storm surges, which may extend kilometers inland from coastal areas, depending on the storm's power. Severe storms, together with the impacts of extreme storms over the long term, have significant effects on the shoreline.

The objective of this conference was to provide a forum for discuss- ing the latest advances in coastal system response to both natural and anthropogenic influences, assess the state of current coastal change and its causes from a perspective of the recent geologic record, and assure that the outcomes of this meeting are conveyed to the general public, and to policy makers worldwide.

The first 4 days of the conference were devoted primarily to talks and poster ses- sions aimed at synthesizing the state of knowledge on the causes, effects, and rec- ommendations of coastal change. On the final day of the conference, the latest advances in coastal system response to both natural and anthropogenic influences, assess the state of current coastal change and its causes from a perspective of the recent geologic record, and assure that the outcomes of this meeting are conveyed to the general public, and to policy makers worldwide.

Participants were encouraged to share their latest research and findings with others in the field. These presentations included talks and posters on a wide range of topics, including but not limited to:

- Climate change and its impacts on coastal systems
- Sea-level rise and its effects on coastal environments
- Coastal erosion and accretion
- Coastal flooding and its impacts on human activities
- Coastal land-use planning and management
- Coastal engineering and infrastructure
- Coastal recreation and tourism
- Coastal hazards and risk assessment
- Coastal policy and governance

The conference provided a valuable opportunity for scientists, policymakers, and stakeholders to share knowledge and collaborate on addressing the challenges posed by coastal change.

What's on the Web?
Read the latest offerings from the AGU Blogosphere.

The Landslide Blog: "Landslides in art, part 2: Good Tornado" (http://goo.gl/9g2qy)

Magma Cusa Lands: "Pumice: a talking stone, and a farewell to Buffalo" (http://goo.gl/L3v2A)

The Plankton Scientist: "What would Leonardo do?" (http://goo.gl/LbOGS)

Mountain Beltsway: "Coal: A Human His- tory" (http://goo.gl/nT7MQ)

Stan's Wild Wind Science Journal: "NASA Operation IceBridge to Antarctica the project ahora mucho contada" (http://goo.gl/5I2V8)

In his blog, Stan presents the latest news and research on climate change and related topics.