



Sierra Club Hawai'i Chapter

PO Box 2577, Honolulu, HI 96803
808.537.9019 hawaii.chapter@sierraclub.org

HOUSE COMMITTEE ON WATER, LAND, & OCEAN RESOURCES

March 16, 2009, 9:00 A.M.

(Testimony is 2 pages long)

TESTIMONY IN STRONG SUPPORT OF SB 468, SD1

Aloha Chair Ito and Members of the committees:

The Sierra Club, Hawai'i Chapter, with 5500 dues paying members statewide, strongly supports SB 468, increasing the protection of Hawaii's coastlines from climate change and erosion.

Our current statewide setback—minimum of 20 feet—is dated and dangerous. Given the rapidly expanding information base of coastal processes in the state, plus new knowledge pertaining to global warming and the impacts of sea level rise on Hawaii's coasts, we believe the legislature should greatly increase the minimum shoreline setback for new coastal developments statewide and require the counties to adopt a parcel-by-parcel setback formula that is based on the historical erosion rate of that particular area. Sometimes “one-size” doesn't fit all.

Managed Retreat

Given the realities of sea level rise caused by global climate change and the accompanying loss of shoreline-protecting coral reef, a policy of “managed retreat” makes the most sense to protect private property, taxpayers, and public shoreline. Setting a significant setback from the shoreline for new construction or redevelopments is the best managed retreat strategy for Hawai'i.

The threat of rising sea level is not speculative. The recent acceleration of melting in Greenland, other arctic areas, and Antarctica has shocked climatologists globally. In 2007 the Arctic ice cap melted to half what it was just four years ago. According to the United Nations, data from the world's largest glaciers in nine mountain ranges indicate that between the years 2004-2005 and 2005-2006 the average rate of melting and thinning more than doubled. *Nature Geoscience* reported in January of 2008 that sea levels may rise five feet or more this century. Rising sea level and its



related impacts will literally change the landscape of Hawai'i as we know it. We will have to redraw the map of our islands.

Significant Shoreline Setback Not Without Precedent

Setting a significant shoreline setback is not without precedent. The County of Kaua'i recently adopted an ordinance for shoreline setback that is the strongest in the state (and likely the nation). The new law requires dwellings to be set back 70 times the erosion times the annual coastal erosion rate plus 40 feet. This aims to protect coastal structures against 70 - 100 years of erosion. Pushing buildings back from eroding waterlines, the law says, is critical to the protection of life and property, the mitigation of coastal hazards, and the preservation of coastal resources.

International examples of managed retreat and related measures as adaptation to sea-level rise include the following:

- **Aruba and Antigua:** Setback established at 50 m (~164 feet) inland from high-water mark.
- **Barbados:** A national statute establishes a minimum building setback along sandy coasts of 30 m (~100 feet) from mean high-water mark; along coastal cliffs the setback is 10 m (~33 feet) from the undercut portion of the cliff.
- **Sri Lanka:** Setback areas and *no-build zones* identified in Coastal Zone Management Plan. Minimum setbacks of 60 m (~200 feet) from line of mean sea level are regarded as good planning practice.
- **Australia:** Several states have coastal setback and minimum elevation policies, including those to accommodate potential sea-level rise and storm surge. In South Australia, setbacks take into account the 100-year erosional trend plus the effect of a 0.3-m sea-level rise to 2050. Building sites should be above storm-surge flood level for the 100-year return interval.

Other US coastal states have taken a protective approach to shoreline setback as well.

In Maine, where local officials can determine such setback requirements, 75 ft. is the minimum; however, that's not necessarily adequate in all cases. In 1995, for example, the top edge of a bluff shoreline moved inland about 200 ft. in just a few hours, destroying two homes and leaving two others in jeopardy.

In North Carolina, the setback is measured landward from the line of stable natural vegetation nearest the sea, usually near the base of the frontal dune system. All single-family homes and buildings of 5,000 square feet or smaller, as well as their septic systems, must be located 30 times the historical, long-term erosion rate from this line with a minimum setback of 60 ft. For larger buildings, the minimum setback is 120 ft.

Rhode Island rules also require a setback equal to 30 times the annual erosion rate for residential structures. Theoretically, that would allow a homeowner 30 years before a house would be threatened—or enough time to pay off the mortgage. The setback for commercial property is 60 times the annual erosion rate.

Ultimately, SB 468 would prevent inappropriate construction too close to the shoreline. When dwellings and buildings are built too close to the shore, beach-destroying seawalls are often requested when erosion threatens to undermine the structures.

Thank you for the opportunity to testify.