

Save the beaches, not the buildings

Canute, the eleventh-century king of England, is best known for his demonstration that even he could not hold back the tides. Can the US Congress learn this lesson?

ALONG most of the coastline of the United States, the beaches are eroding. It is nature's way. The coastal barriers, narrow strips of sandy land and wetlands that mark the East and Gulf coasts, stretching more than 15,000 miles from Maine to Texas, are particularly vulnerable to erosion. As geographer Rutherford H. Platt of the University of Massachusetts has written, "Coastal barriers are naturally unstable landforms whose exact position, width, length and topography are subject to gradual and sometimes very rapid change. A striking characteristic of most coastal barriers in their natural state is their tendency to migrate or recede gradually landward."*

That being so, it hardly seems sensible that people build houses on shifting sands. Perhaps that can be explained by man's romantic love of the sea. But what can possibly explain the fact that the US Congress years ago agreed to provide flood insurance, at federal expense, for home owners whose beachfront property is damaged by storms and erosion? Congress's outrageous propensity to bend to the wishes of special interests is the only plausible answer because nothing in the scientific literature suggests that 20-storey luxury condominiums and the Cape Cod seashore were meant to be part of the natural order of things.

Legislation that passed the US House of Representatives a year ago and is now under consideration in the US Senate would all but eliminate federal subsidies for flood insurance and also limit the federal government's commitment to restore shifting sands. Real estate investors, who stand to gain the most when apartments or colonies of houses are built on the beach, are up in arms, arguing that property values would drop significantly if property owners had to pay for their own insurance. It is a prospect that brings tears to the eyes.

The wonder is that legislation to relieve the government of this foolish obligation has been so long in coming. It is not as if coastal erosion were a new phenomenon, or one that man had learned to control. Quite the contrary.

Nearly a century ago, a hurricane pounded the Gulf coast at Galveston, wiping out scores of buildings. The city's response? It built a seawall ten miles long. The wall is still standing but the beach eroded anyway. Nevertheless, people determined to dwell at the water's edge have continued to believe that seawalls can protect them. Platt recounts the effect of a series of seawalls along

the New Jersey beaches. "Armoring often leads to the loss of the beach itself," he says, "due to increased wave scour, steepening of the shore profile and loss of dunes as a source of beach sand."

Another way to thwart nature, often equally ineffective, is through the technique of 'beach nourishment'. Sand from a nearby inlet or sandbar is pumped onto the eroding beach. A nourished beach on Long Island washed away within a year, at no small cost.

Four years ago, Ocean City, Maryland, dumped 2.4 million cubic yards of sand on its disappearing beaches, which simply eroded again under battering by severe storms. But Ocean City did not give up. It just dumped more sand — 3.6 million cubic yards the second time around at a cost of \$45 million, but Congress's General Accounting Office predicts that costs will easily reach \$250 million by the end of the decade because the seven-mile beach will almost certainly have to be renourished with millions of cubic yards of sand every couple of years. Dredgers pull sand from the ocean and send it through steel pipes to the beach so that vacationers can lie in the sun (and increase their chances of getting melanoma).

In a report issued in 1987 by the US National Academy of Sciences (*Responding to Changes in Sea Level*), academy scientists estimated that a predicted rise of sea levels, to a potential high of 3.5 metres 20 years from now, will increase the likelihood of erosion, as will global warming that will lead to more hurricanes and, in turn, more coastal erosion.

The proposed legislation also takes into account problems of erosion along the shorelines of the Great Lakes, which are less vulnerable but nevertheless threatened. According to Platt, "The Lakes reached a record low level in 1964 and then rose to two successive peak periods in 1973–74 and 1985–86, with a difference of nearly six feet between the lowest and highest levels." During high water, hundreds of miles of coastline receded to the detriment of homeowners who built too close to the water's edge and taxpayers who had to bail them out.

Environmental groups, including the Sierra Club and the Audubon Society, have lobbied hard for legislation that would point the way to sensible coastal conservation. Even the Federal Emergency Management Agency (FEMA), a federal agency best known for its plans to evacuate cities in the event of nuclear war by directing thousands of motorists on to already clogged highways, has put what little weight it has behind

the pending legislation.

The legislation would not only gradually get the US government out of the business of paying for flood insurance for beach dwellers, it would also put strict limits on where new buildings could be constructed, based on academy estimates of the pace of erosion at various places along the coast.

If it is true that the extent of erosion can be predicted over 10 years, 30 years and even 60 years, as academy scientists believe, laws can be rewritten to take anticipated erosion into account. For instance, no one would be permitted to build anything new in a 10-year zone, while those who already have beachfront homes would be given an insurance allowance for either demolishing or relocating their houses. And substantial limits would be placed on new construction in 30-year and 60-year zones.

Needless to say, the free market effects of this legislation would bring property values down, just as landowners fear. But that is what the free market is all about.

This all makes very good sense. Man-made destruction of the coastline would be thwarted and the taxpayers from the cornbelt would stop supporting eastern beach lovers. The evidence is that destructive building habits, especially the miles of high-rise buildings that mar the East coast from New Jersey to Florida (it is no longer possible even to see the ocean from Florida's ocean highway), were fostered in the first place by the 1968 laws that made federally subsidized insurance possible.

Today, the owner of beachfront property valued at about \$200,000 pays a mere \$950 a year for flood insurance. On the open market, a similar policy would cost more than \$18,000, assuming that private insurers would be willing to take the risk at all. New development would essentially come to a dead halt, reacting to the free market principles that the administration of President George Bush so favours. Nature would be the real beneficiary.

But it may be too much to hope for. The political influence of the real estate lobby, not to mention that of home owners who argue that a change in insurance laws would amount to an unconstitutional taking of land, is not to be underestimated, but the US Congress should approve legislation to limit federal insurance subsidies to people who want to build on eroding sands.

Barbara J. Culliton

* *Cosmos*, 1991. The annual journal of the Cosmos Club, Washington, DC.