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The transformation of America's coasts

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As the planet shrinks in both our imaginations and in the growing interconnections of our daily lives, the similarities between peoples, their values, their aspirations and their behavior become more striking. One expression of such similarity is the process by which people are transforming the coastal ecosystems that have become the primary habitat of our species. The stages in this transformation process are remarkably consistent. What varies from one continent to another is the pace of change and the prospects for a politically acceptable, and ecologically viable, outcome.

Let's consider the transformation process as it has played out in Rhode Island. When the first Europeans settled here in the early 1600s, they marveled at the beauty of the landscape and the courtesy of the Narragansetts. Natural wealth, in the form of arable soils, timber, fish, shellfish and game were abundant. The ideas and values of the European settlers led them to exploit these resources quickly, not merely for their own use but through trade with Europe and outposts elsewhere in the Americas and Africa to amass power and wealth—a tendency common to all human societies. What changed was the scale of such trade and wealth.

Lobsters were once so abundant that a boy could collect enough at low tide to feed a ship's crew. Migrating schools of fish were readily captured close to shore in quantities measured by the wagon load. For generations vast quantities of seaweed were hauled from south shore beaches to fertilize fields inland—the rule of thumb being that a field needed to be covered with seaweed a foot deep at least every seventh year. The impacts accumulated over a couple of centuries as the trees were felled, marginal lands converted to pastures for livestock, seemingly endless supplies of oysters, soft-shelled clams and gluts of migratory fish and birds gradually dwindled.

Today's drastic fisheries decline offshore is only the latest in a long series of stepwise reductions in the species that people favor. The decline in nearshore fisheries gave way to aquaculture and we saw a boom in oyster growing—much of it on the grounds used by fishermen. This produced the hatred for aquaculture that continues to be a force in Rhode Island today. The oyster industry collapsed 50 years ago, prey to declining water quality, destruction of spawning habitat and therefore a scarcity of oyster seed, and to the turmoil brought by a major hurricane. On the ocean shore the great kelp beds that regularly produced the seaweed tides were gone more than a generation ago. More recently, the best farmland has been covered by malls and chopped up into house lots.

This process of mining the natural wealth was accompanied by violence to the less powerful groups in the society, and political intrigue and corruption among public officials. Oyster leases were often given out according to who you knew and kickbacks from growers to corrupt officials were rife. Some growers patrolled their beds with armed guards. The struggles over the pollution of the Bay were no less prolonged and fraught with deceit and incompetence. For decades, the Cities of Providence and Pawtucket used every excuse and subterfuge to avoid meaningful controls over polluters or making adequate investments in wastewater treatment. Success came with massive grants from the federal government and federal antipollution laws. Today all this is history and most of it is forgotten.

But, if you take a flight to such countries as Ecuador, Thailand, the Philippines or Kenya, a remarkable similar sequence of events is underway. One of the differences is when it is happening. Another is how quickly. Ecuador's great deforestation occurred during the first decades of this century, not two hundred years ago as in New England. An elderly man can describe hunting deer in seemingly endless coastal forests with trees so big "it felt like walking through a cathedral." Today those forests are parched, neglected pastures producing little or nothing for the people living there—though their numbers have increased fourfold in the same period. In Rhode Island, the farmers could migrate west. In Ecuador, Central America or Thailand, there is nowhere to go to farm or fish. The option is a city. Like Rhode Island, Ecuador and Thailand have seen an aquaculture boom—but for shrimp—and it has displaced the fisherfolk, often violently. A few people have become very rich. There, too, corruption among officials is common. The story repeats itself across southeast Asia with some variations. But the outline is the same. What unfolded here in Rhode Island over two and a half centuries, well before our generation, has been happening in the last three to four decades to coastlines elsewhere.

Another, and more important difference between coastal change here and in countries to the south, is that here, in an industrial and now post-industrial society, such impoverishment of our local resources is counterbalanced by massive in-flows of resources of every kind from other regions of the world. Food—including Ecuadorian shrimp and Central American melons and broccoli—electricity from Canada, petroleum from the Persian Gulf and textiles from China flood in. To us they are extraordinarily cheap. But for many societies seeing the same coastal transformation process today, such flows of goods and the subsidies that have bankrolled our wastewater treatment are nowhere on the horizon. For much of the planet's people a coastline is the end of the road—not the jumping-off point for a better future somewhere else.

Does this mean that the future is hopeless? No. But it suggests that we must reshape the ideas that produce this ubiquitous transformation process. Most of the degradation and exploitation of coastal ecosystems and people is unnecessary and self-defeating. It will not be inevitable if we ask and answer basic questions. What is fair, what is just and does it matter? Are we today responsible for the qualities of the little corners of this planet we influence?

The biggest lesson I learned at seemingly endless public meetings on coastal management topics in Rhode Island was that people demanded that management decisions are fair and that a high standard of honesty and accountability is maintained. This lesson is repeated and reinforced in country after country, most passionately where the people's plight is most desperate. The issues at the core of how we respond to the transformation of our coasts are ethical. Until we recognize that reality, any attempts to improve how ecosystems and their people are managed will falter and fail.

- Stephen B. Olsen is director of URI's Coastal Resources Center, now celebrating its 25th anniversary.