

Historic and Contemporary Land Use on the Chesapeake Bay Watershed: The Relationship of Working Landscape to the Satoumi Perspective

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The ratio of Chesapeake Bay watershed area to estuary volume, $166,400 \text{ km}^2 : 70 \text{ km}^3 = 2,400$, is more than an order of magnitude greater than that of any major coastal system on earth. It follows that the nature of land use on this watershed has a major influence on the ecology of estuary itself.

Humans have occupied the lands of the Chesapeake Bay watershed for at least 10,000 years. Evidence from recent archeological studies indicates that the peoples who lived here prior to European contact around 1500 used extensive burning to create and maintain a grassland/savannah landscape that fostered abundance of game and permitted extensive agriculture. Estimates differ, but perhaps 80% or less of the pre-contact watershed was forested. Early colonists and pioneers initially melded New World crops with Old World practices to develop a small-scale subsistence agriculture that persisted on the watershed for nearly 200 years. Introduction of the moldboard plow after 1700 promoted large-scale agriculture for cash grain crops that required extensive land clearing. By the time of the American Civil War around 1863 the Chesapeake Bay watershed was only 20% forested. As the soil lost its fertility and richer lands became available west of the Appalachian Mountains, wholesale abandonment of farmlands allowed the forest to return through the process of ecological succession. This, coupled with additional large-scale changes in farming practices and with governmental policies that encouraged the residential development of formerly rural lands, have created today's watershed landscape that is approximately 60% forested, 25% agricultural, 10% urban, and 5% lands in transition.

History now tells us that humans have been integrally associated with the Chesapeake Bay watershed since their arrival 10,000 years ago and continuing to present day. People have managed these lands for the benefit of their communities and the lands in turn have influenced the nature, well-being, and culture of those communities. We call this relationship a "working landscape" and suggest that the most successful environmental policies are those implemented to keep the landscape truly "working" for the mutual benefit of the natural resources and the human communities that share the system together. Satoumi is a key perspective that links the "working landscape" of a watershed with the management of its associated coastal sea in a manner that maximizes aquatic "productivity and biodiversity with human interaction."

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