

Figure 1: Historical changes in forest cover show that reforestation of abandoned farmland from the mid-19th through the late 20th century has provided a second change to determine the fate of the region’s forests. The regrowing forests have been storing tremendous amounts of carbon. Recent trends show forest loss is occurring in all six New England states.

Sources: Foster et al. 2010. *Wildlands and Woodlands: A Vision for the New England Landscape*; data from the National Land Cover Database.

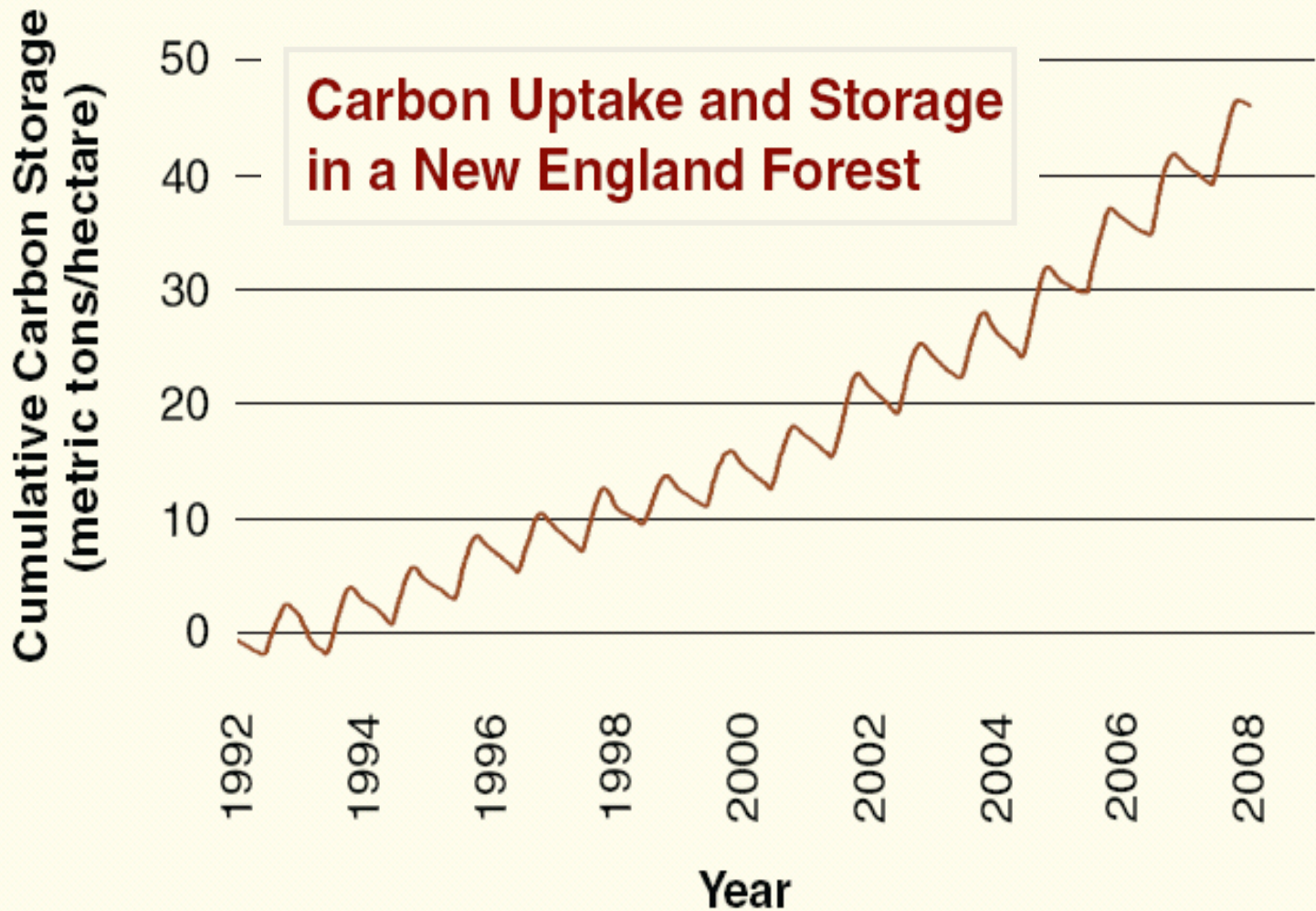
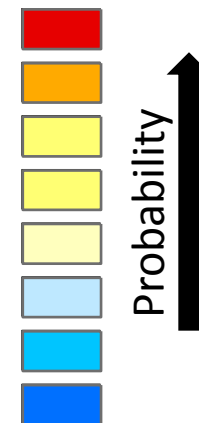
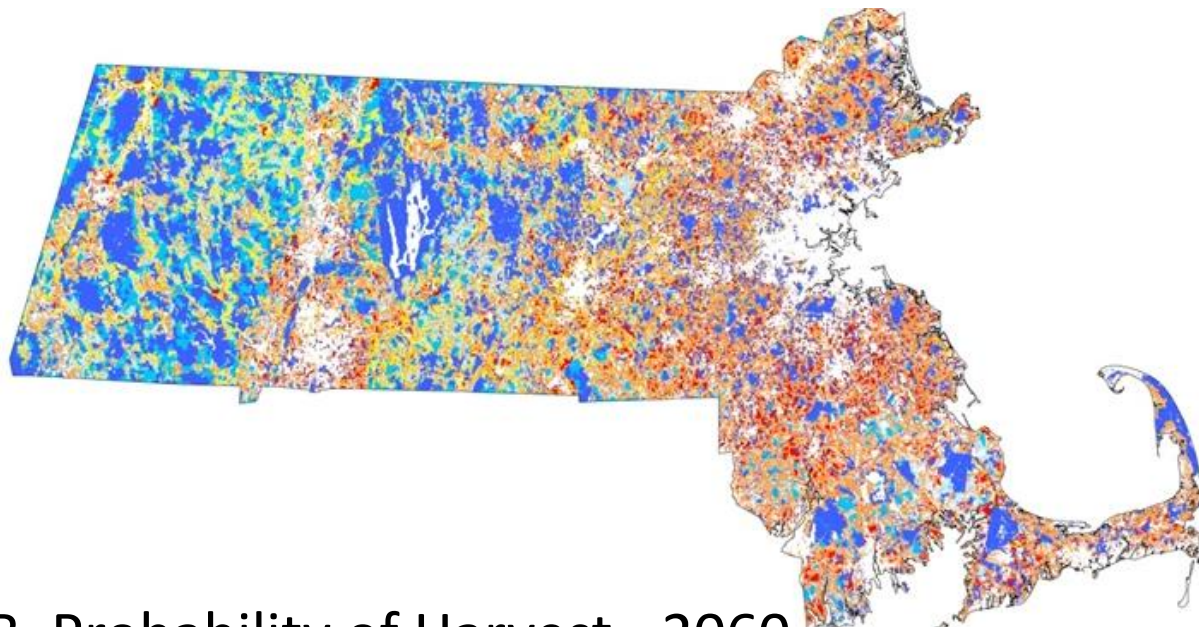


Figure 2: The rate of carbon uptake and storage measured at a 100+ year old stand at the Harvard Forest is continuing to increase as the forest ages, confirming that old forests in New England play an important role in reducing the pace of climate change.

Sources: Foster et al. 2010; data from the Long-Term Ecological Research program at the Harvard Forest, courtesy of William Munger and Steven Wofsy of the Department of Earth and Planetary Sciences, Harvard University.

A. Probability of Development - 2060



B. Probability of Harvest - 2060

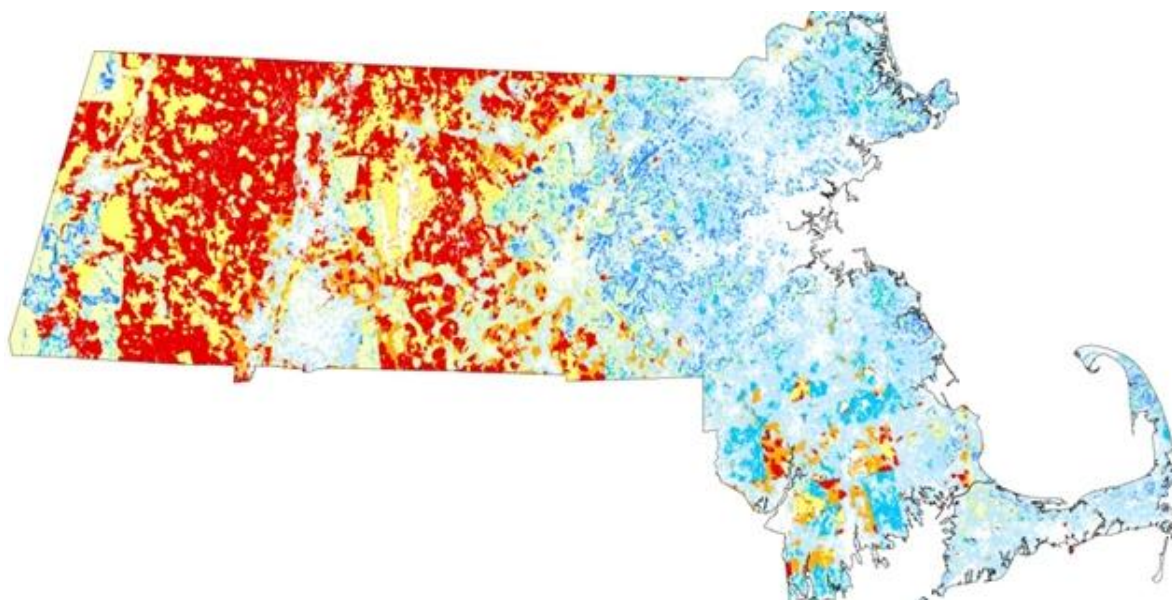
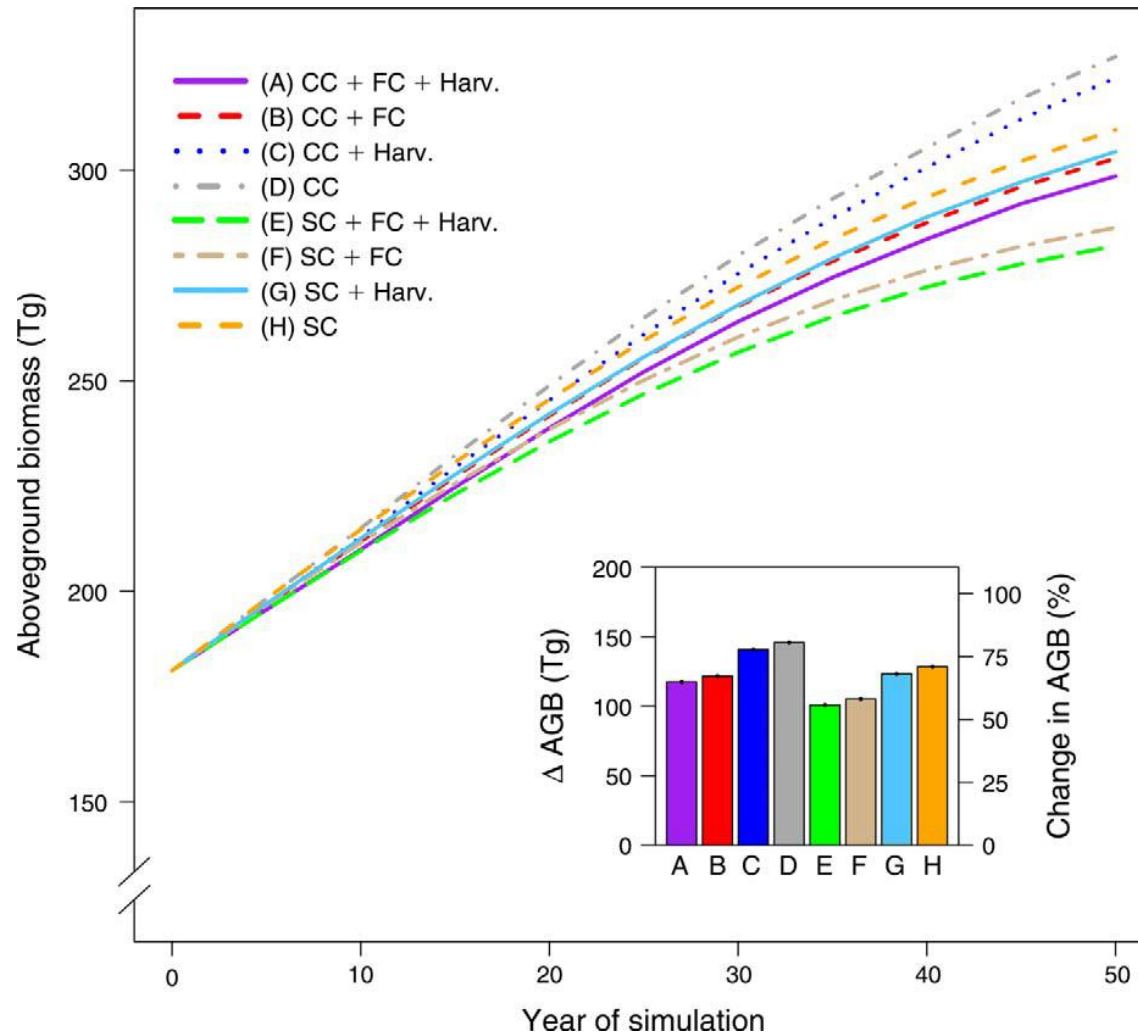


Figure 3: Maps show (A) the probability zones of future forest conversion to development based on the pattern of forest conversion observed in the period spanning 1985 -1999. (B) probability zones of future timber harvest zones based on the pattern of forest harvest observed in the period spanning 1985–2004.

Source: Thompson et al. 2011. The influence of land use and climate change on forest biomass and composition in Massachusetts, USA. *Ecological Applications*.

Change in Aboveground Biomass in MA Forests Under Current Trends of Forest Conversion, Harvesting and Climate Change – 2010 - 2060



Average change in live aboveground biomass for each of the simulations used within the factorial experiment, which treated climate change (CC), forest conversion to developed uses (FC), and timber harvests (Harv.) as treatments relative to a static climate (SC). The inset histogram shows change in AGB from year 0 to year 50 for each scenario, A–H.