

An aerial photograph of a city, likely Boston, showing a dense urban landscape with numerous buildings and streets. A large, green, rectangular park area is visible in the center-left, featuring a winding river or canal to its left. The text is overlaid on the image in a white, sans-serif font.

# Working on urban biogenic C

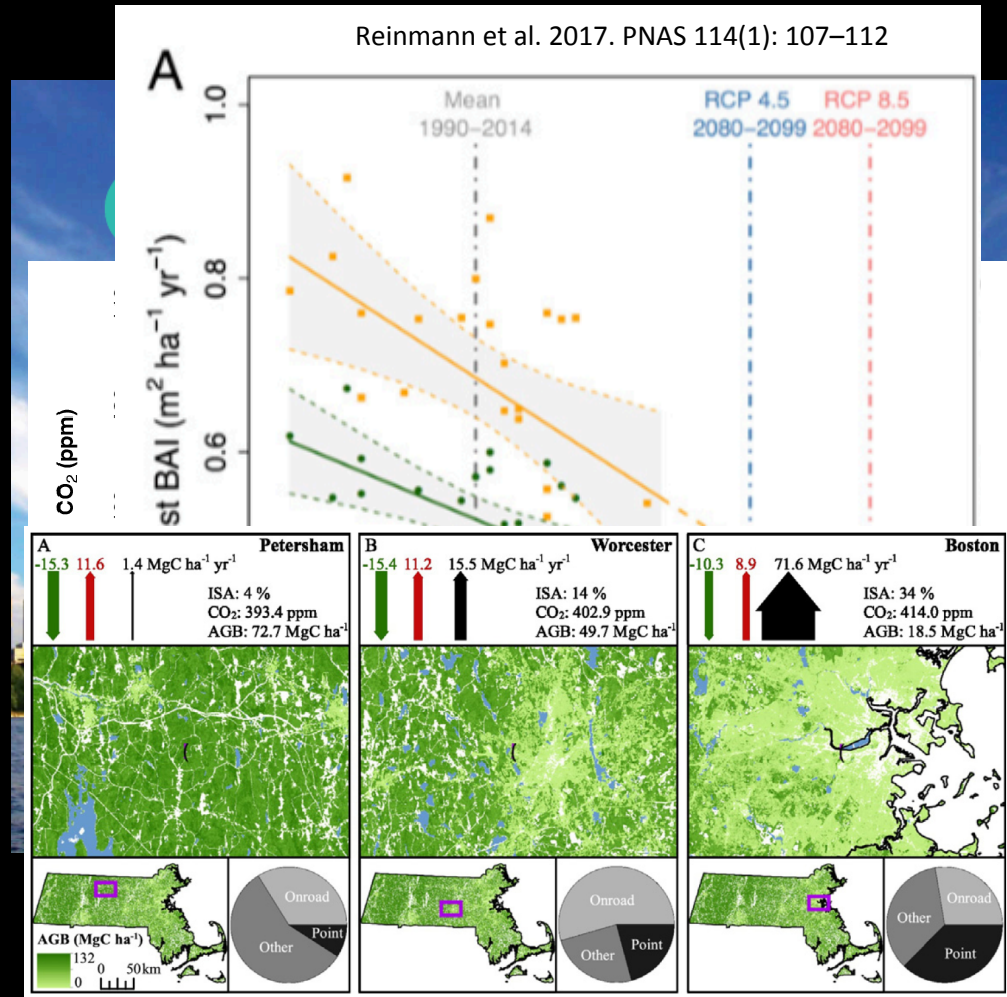
Andrew Trlica

Boston University, Earth & Environment

24 October 2018

# The biogenic gap

- Emissions reductions goals and enhancing services from “green” infrastructure.
- Urban biogenic C flux can be significant...
- ...but urban ecosystem function is special...
- ... and difficult to take into account

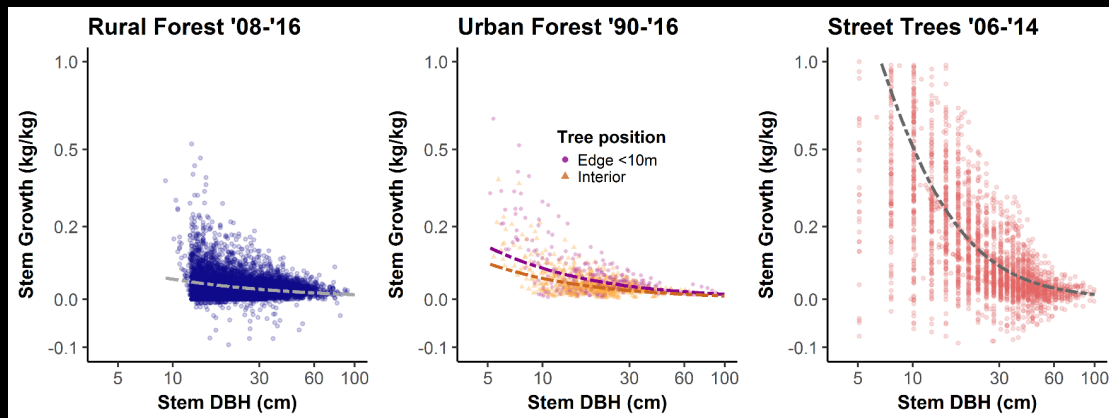
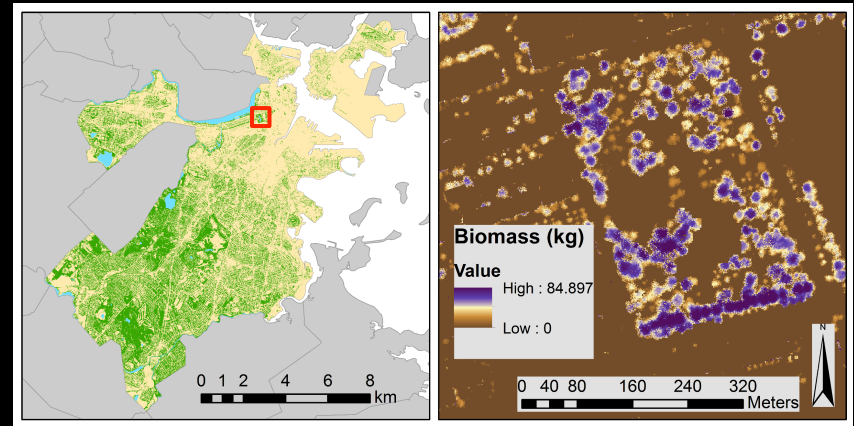


Hardiman et al., 2017. STOTEN 592: 366-372.



# Boston forest C uptake

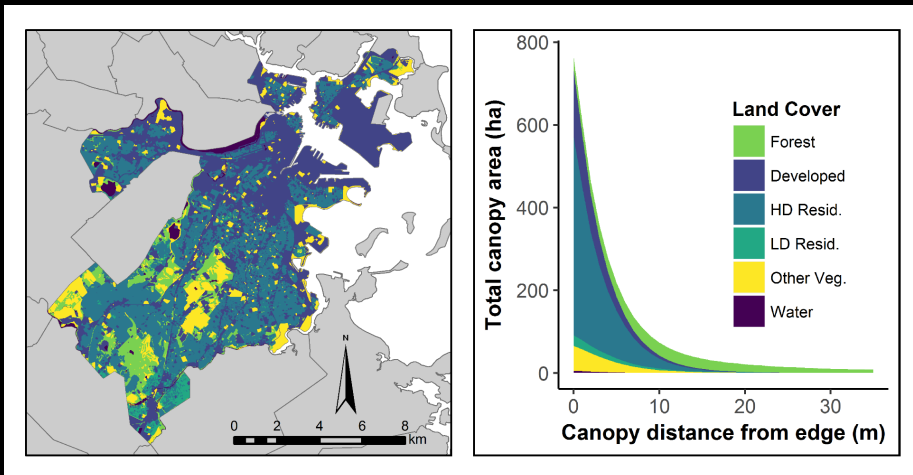
- 1 m tree canopy + biomass map
- Local urban tree growth observations
  - Rural for comparison



- Simulator for policy affecting tree mortality/planting through 2040

# Results – More in Poster

- Growth C uptake 2x estimate based on rural function
  - Allocated spatially at 30 m
  - $\sim 1 \text{ MgC/ha/yr}$ , most in residential areas



- Urban canopy highly fragmented
- Tree mortality drives future C uptake