

Past Land Use

Affects Present Ecology at LTER Sites

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Luquillo LTER

# ECOLOGY

## **A historical science**

includes socio-economic causes of past land use

## **An integrative science**

includes sociology and economics











(Internat. Inst. of Tropical Forestry)

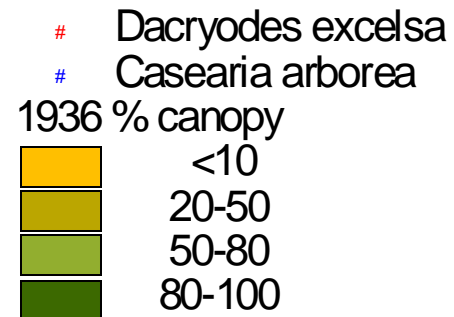
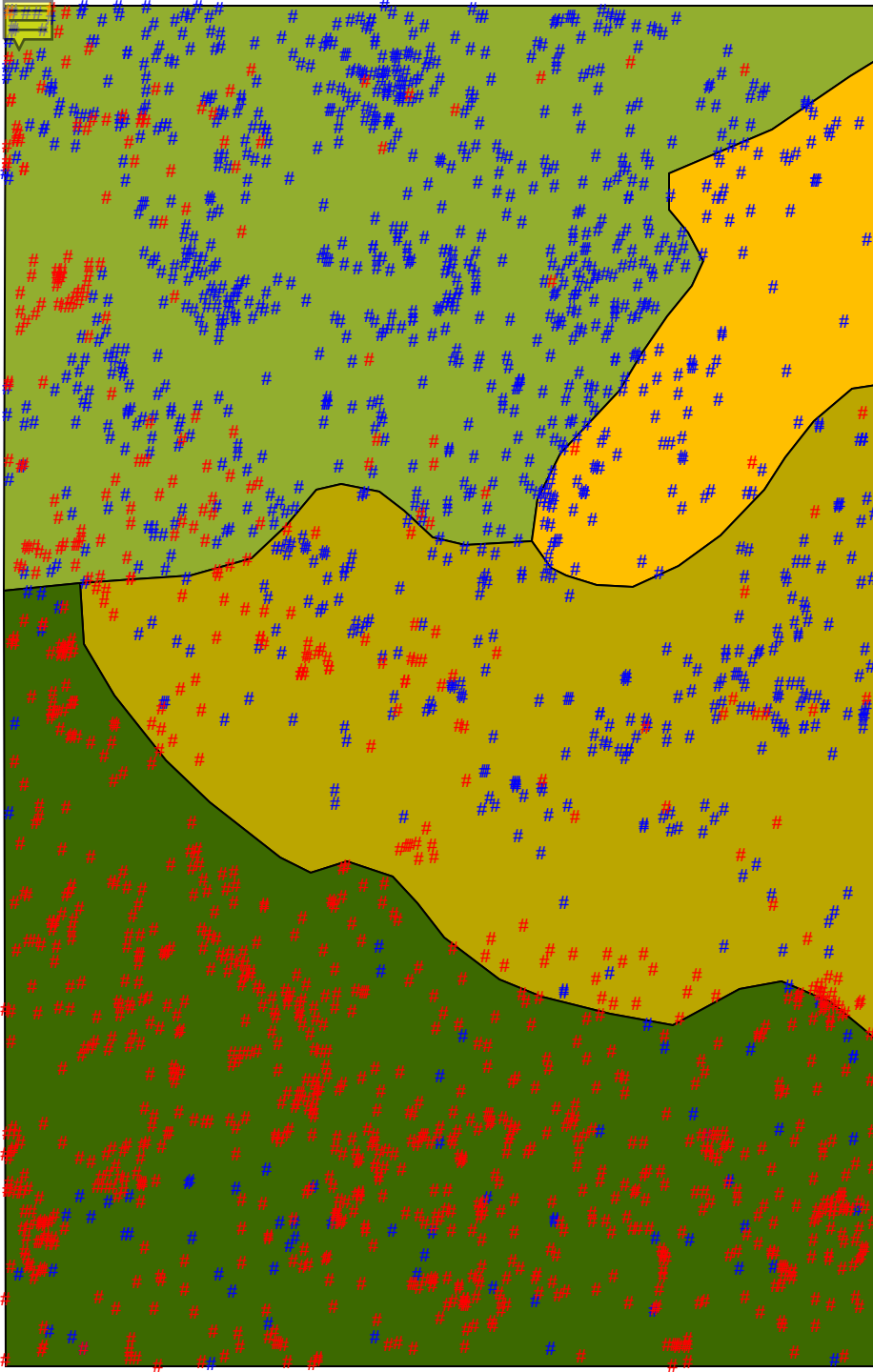




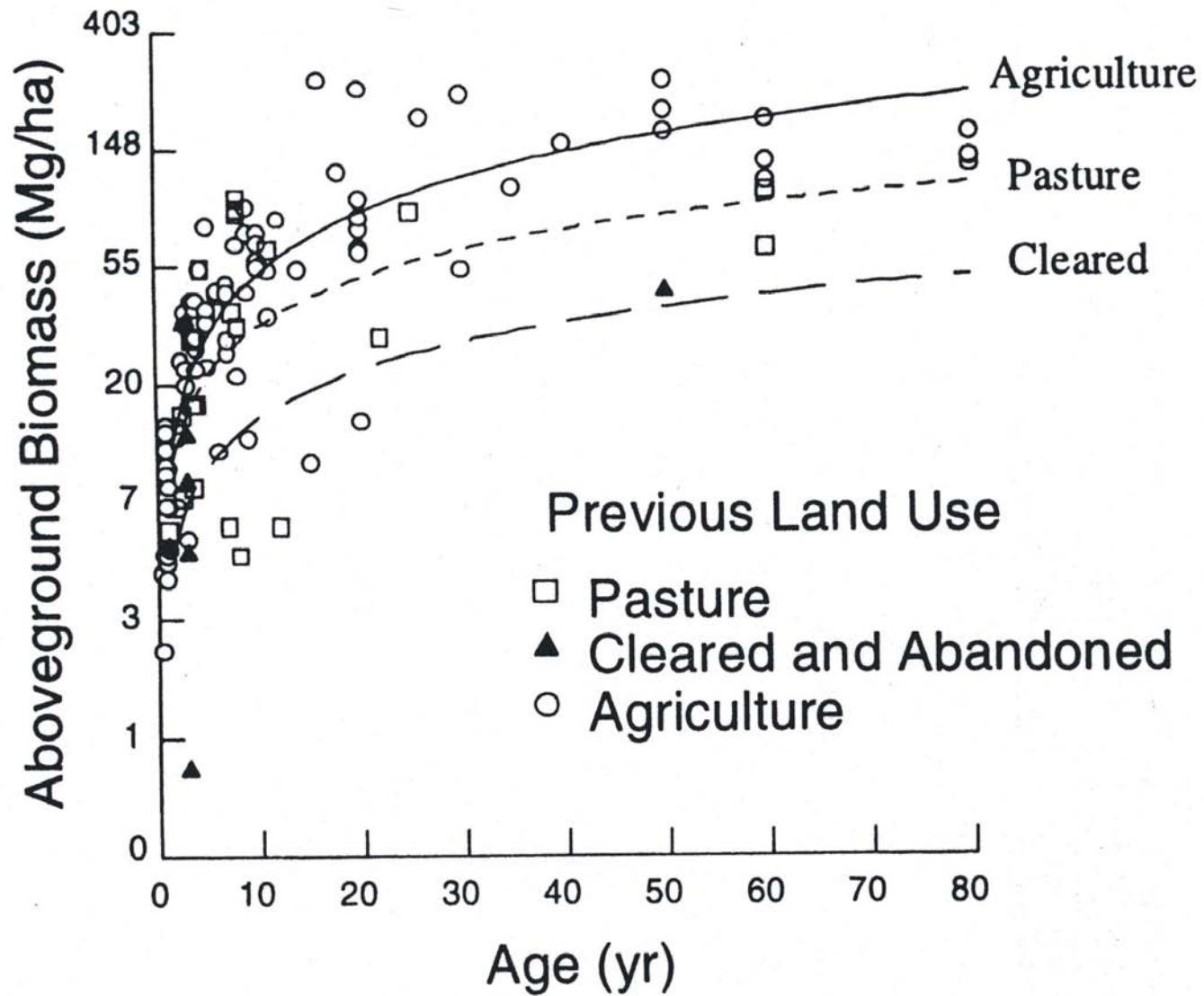
(Internat. Inst. of Tropical Forestry)

# Canopy cover in 1936 Luquillo Forest Dynamics Plot El Verde, Puerto Rico

(Thompson et al.)



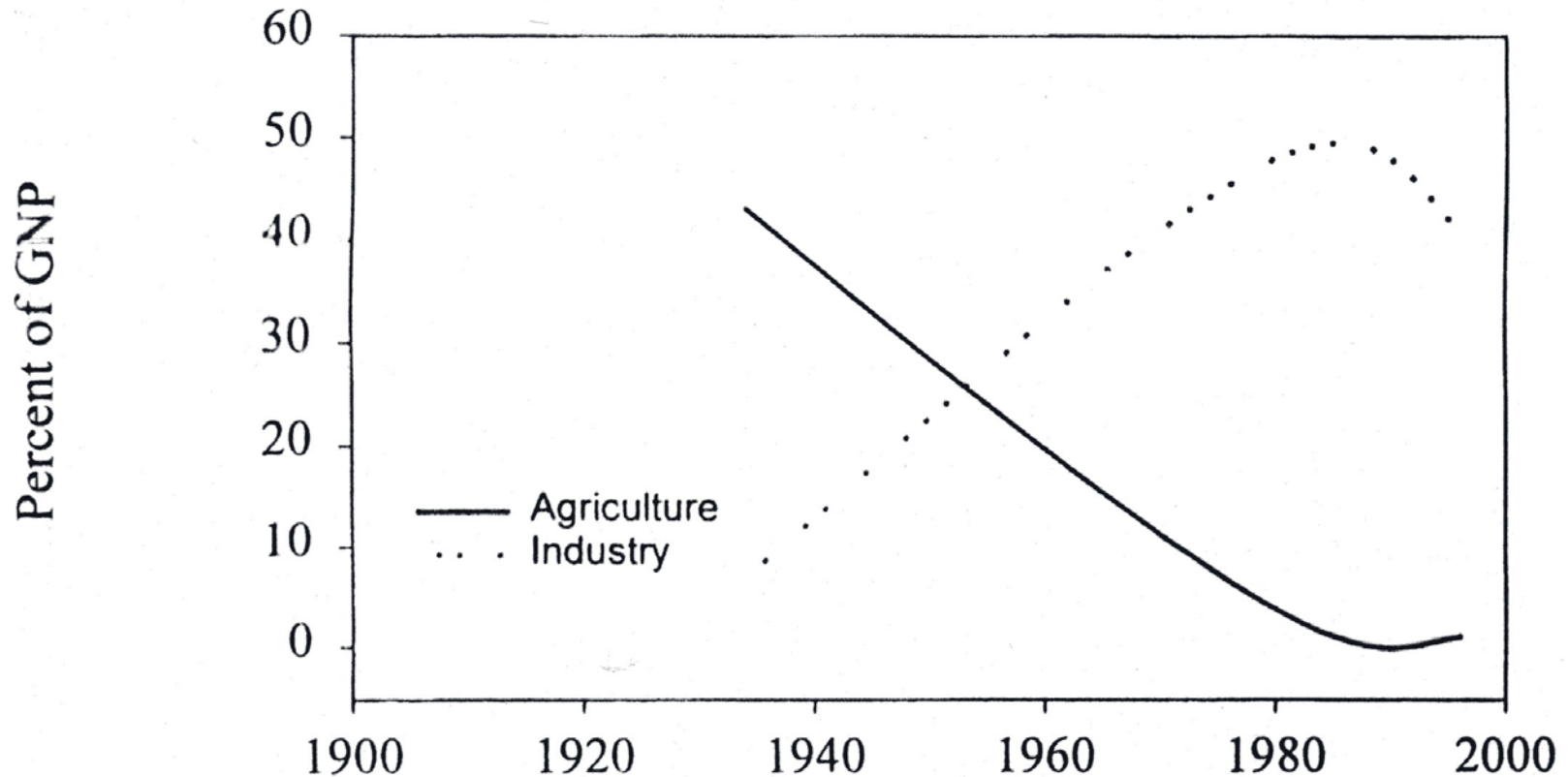
(Silver et al.)





# Trends in agriculture vs. industry in Puerto Rico

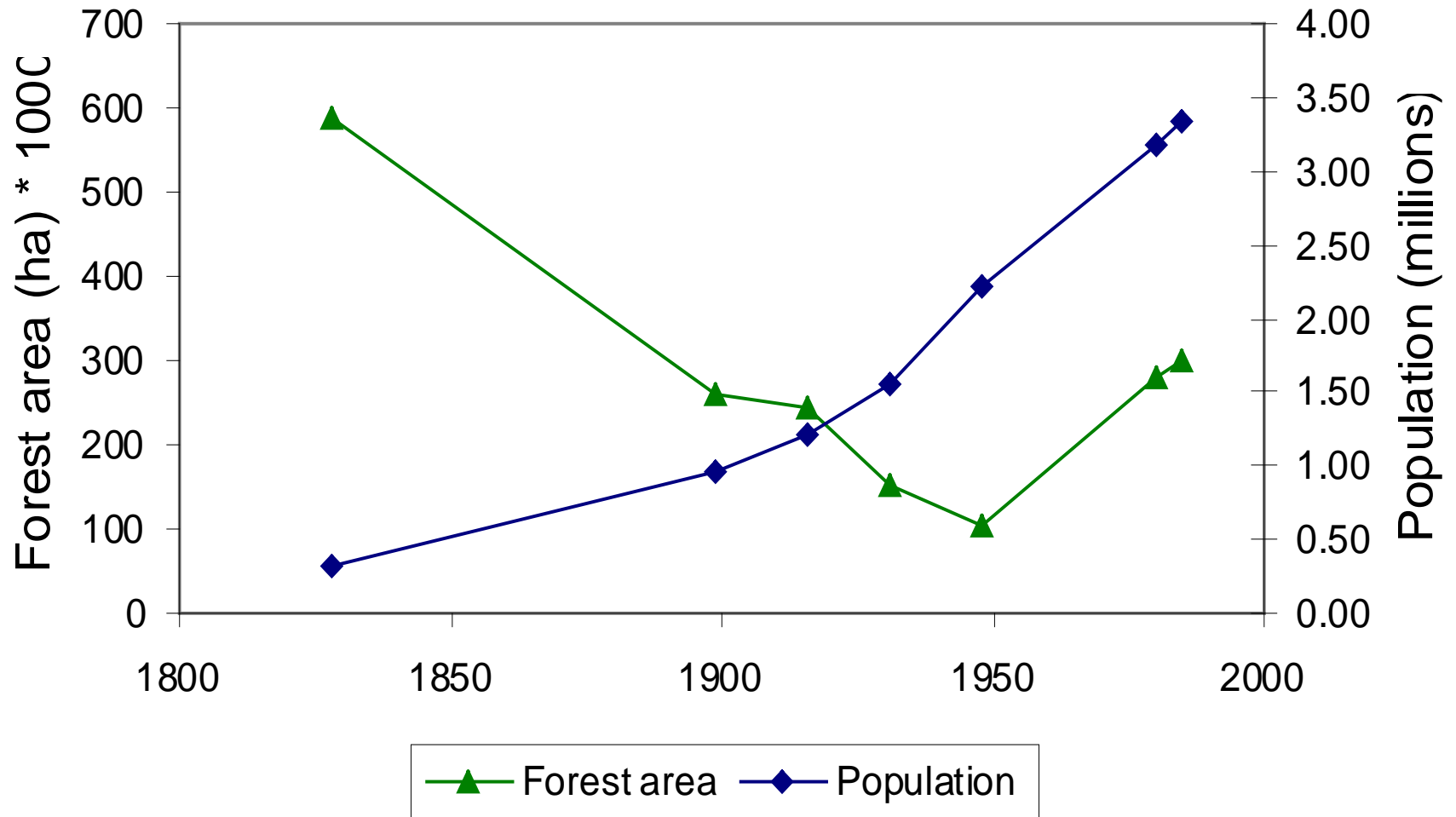
(del Mar López et al.)



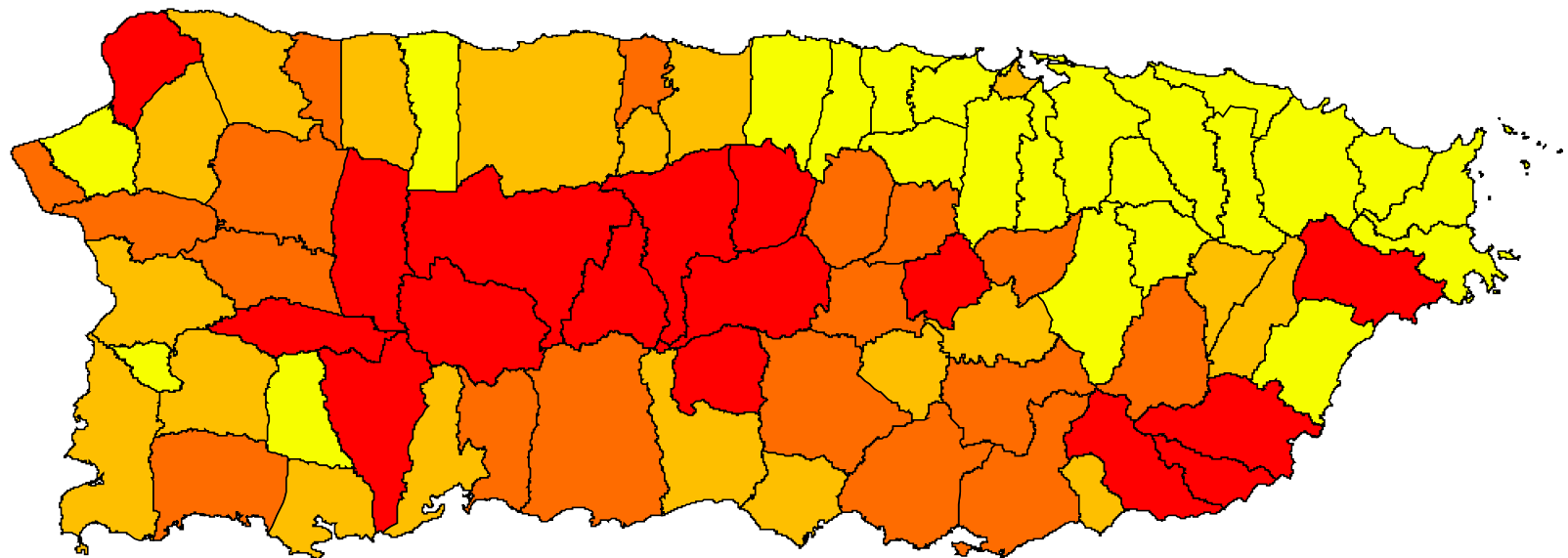


# Population and forest area trends in Puerto Rico

(Birdsey & Weaver)



# PUERTO RICO INTERNAL MIGRATION 1950 - 1990



0 10 20 30 40 50 60 Kilometers

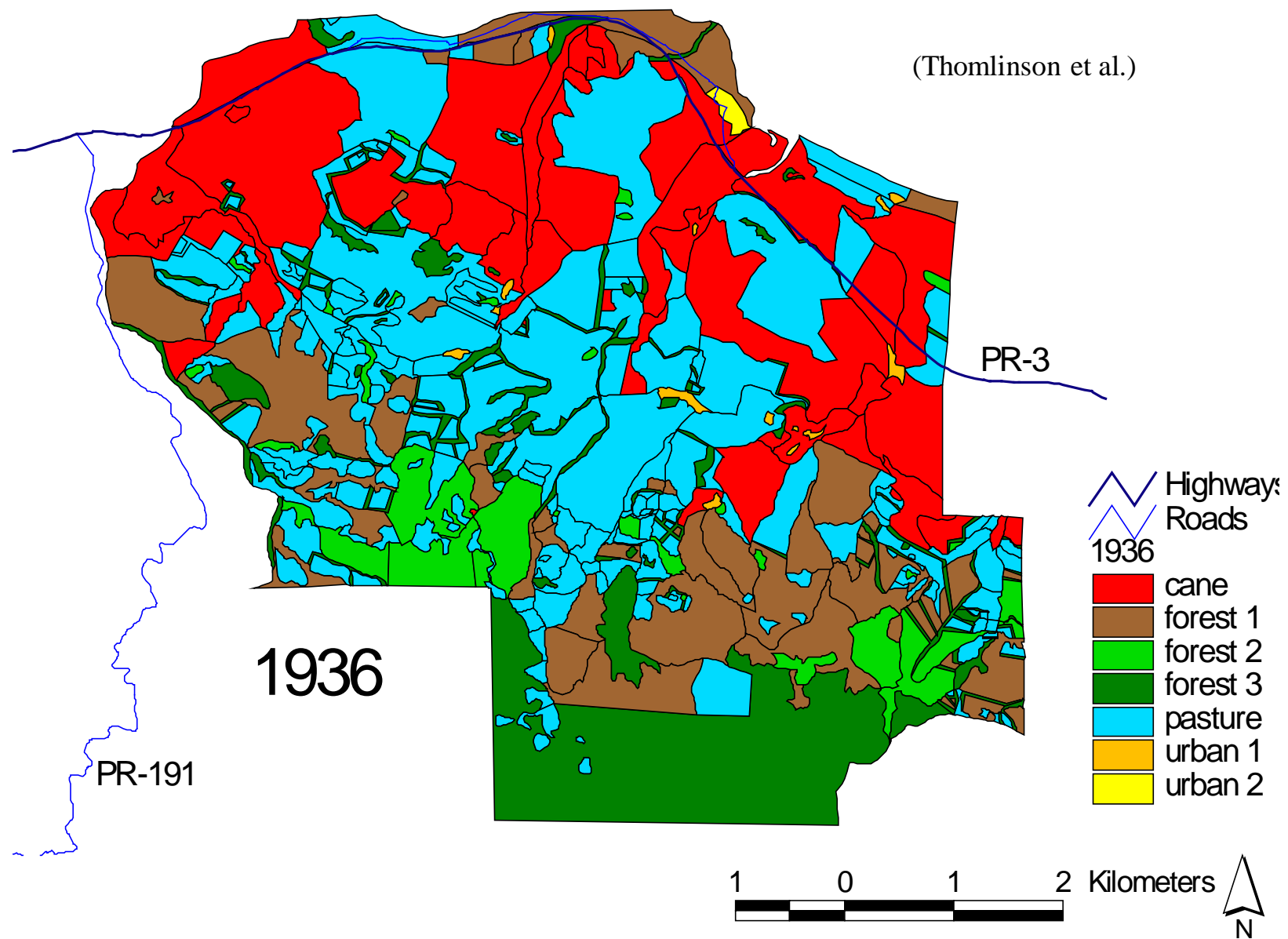
## Migration

- Strong outmigration
- Moderate outmigration
- Slight outmigration - neutral
- Immigration



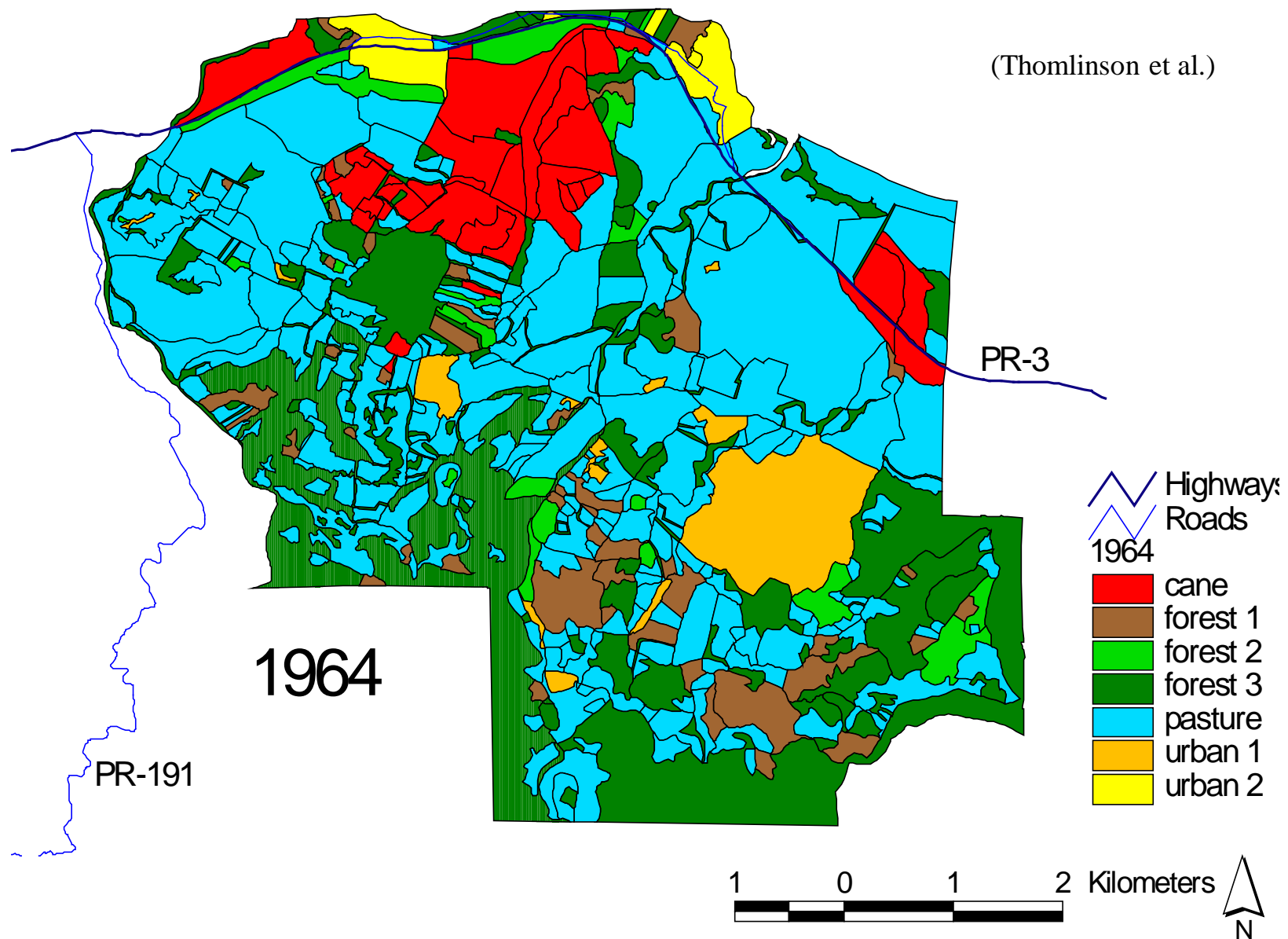




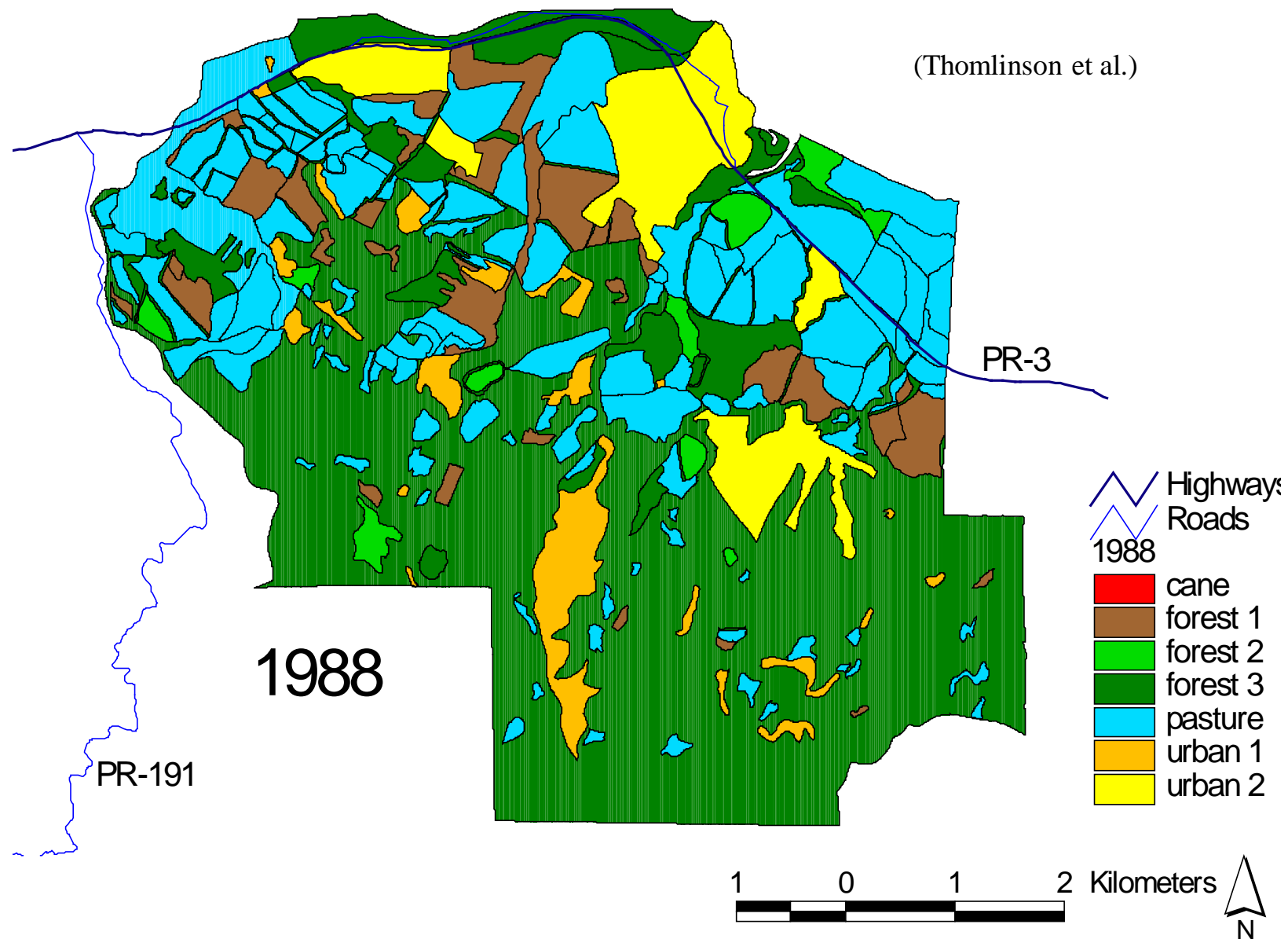




(Thomlinson et al.)



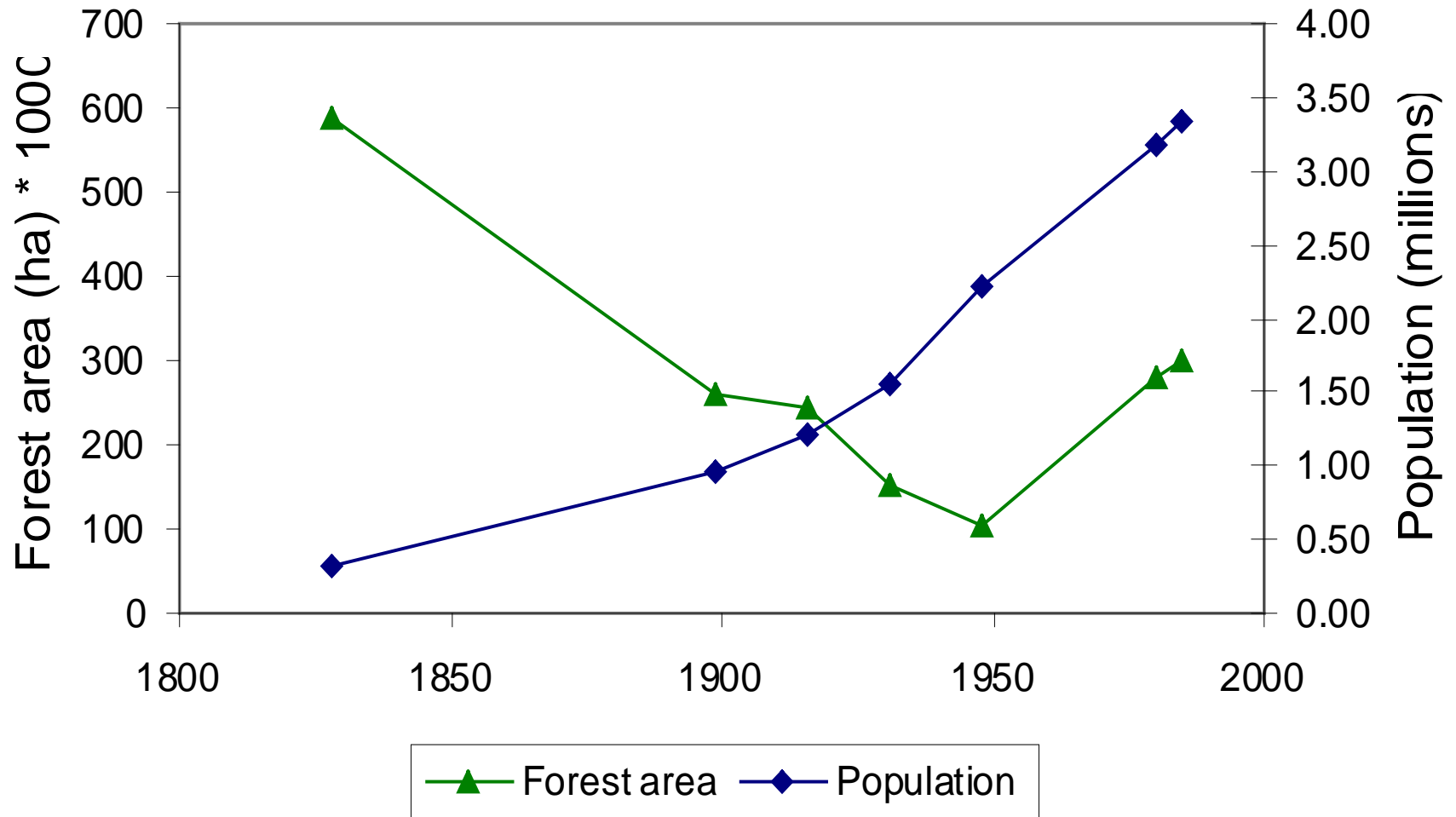






# Population and forest area trends in Puerto Rico

(Birdsey & Weaver)





# Southern New England Landscape Past and Present

(Harvard Forest LTER)





# Forest Cover and Population Trends in New England

(Harvard Forest LTER)

