

Southeast

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Key Message 22.1

Regional Growth Increases Climate Risks

The Southeast's population has grown and is expected to continue growing, mostly in metropolitan areas and along its coastline (*very likely, very high confidence*), putting more communities and their assets into harm's way from increasing risks related to climate and land-use changes (*very likely, very high confidence*). Conversely, many rural places are facing declining populations with a growing percentage of older residents (*very high confidence*), making these areas particularly vulnerable to the impacts of a changing climate (*likely, high confidence*). At the same time, decision-makers frequently use outdated and/or limited information on climate-related risks to inform adaptation plans, which as a result fail to account for worsening future conditions (*likely, high confidence*). These climate adaptation efforts also tend to be concentrated in wealthier communities, leaving under-resourced and more rural populations, communities of color, and Tribal Nations at growing and disproportionate risk (*likely, high confidence*).

Key Message 22.2

Climate Change Worsens Human Health and Widens Health Inequities

Human health and climate stressors are intimately linked in the Southeast (*very high confidence*). Community characteristics such as racial and ethnic population, chronic disease prevalence, age, and socioeconomic status can influence how climate change exacerbates, ameliorates, or introduces new health issues (*very high confidence*). Climate change is already impacting health in the region (*very likely, very high confidence*). There are effective strategies to address the health impacts of climate change in the Southeast that have multiple benefits across social and environmental contexts (*high confidence*).

Key Message 22.3

Climate Change Disproportionately Damages Southeastern Jobs, Households, and Economic Security

Over the last few decades, economic growth in the Southeast has been concentrated in and around urban centers (*high confidence*) that depend on climate-sensitive infrastructure and regional connections to thrive (*medium confidence*). Simultaneously, rural and place-based economies that rely on the region's ecosystems are particularly at risk from current and future climate changes (*very likely, high confidence*). Global warming is expected to worsen climate-related impacts on economic systems, labor, and regional supply chains in the Southeast, with disproportionate effects on frontline communities (*very likely, high confidence*). A coordinated approach that recognizes present-day inequities and the interdependencies between rural and urban communities will be necessary to secure the region's economic vitality (*very likely, high confidence*).

Key Message 22.4

Agriculture Faces Growing Threats, but Innovations Offer Help

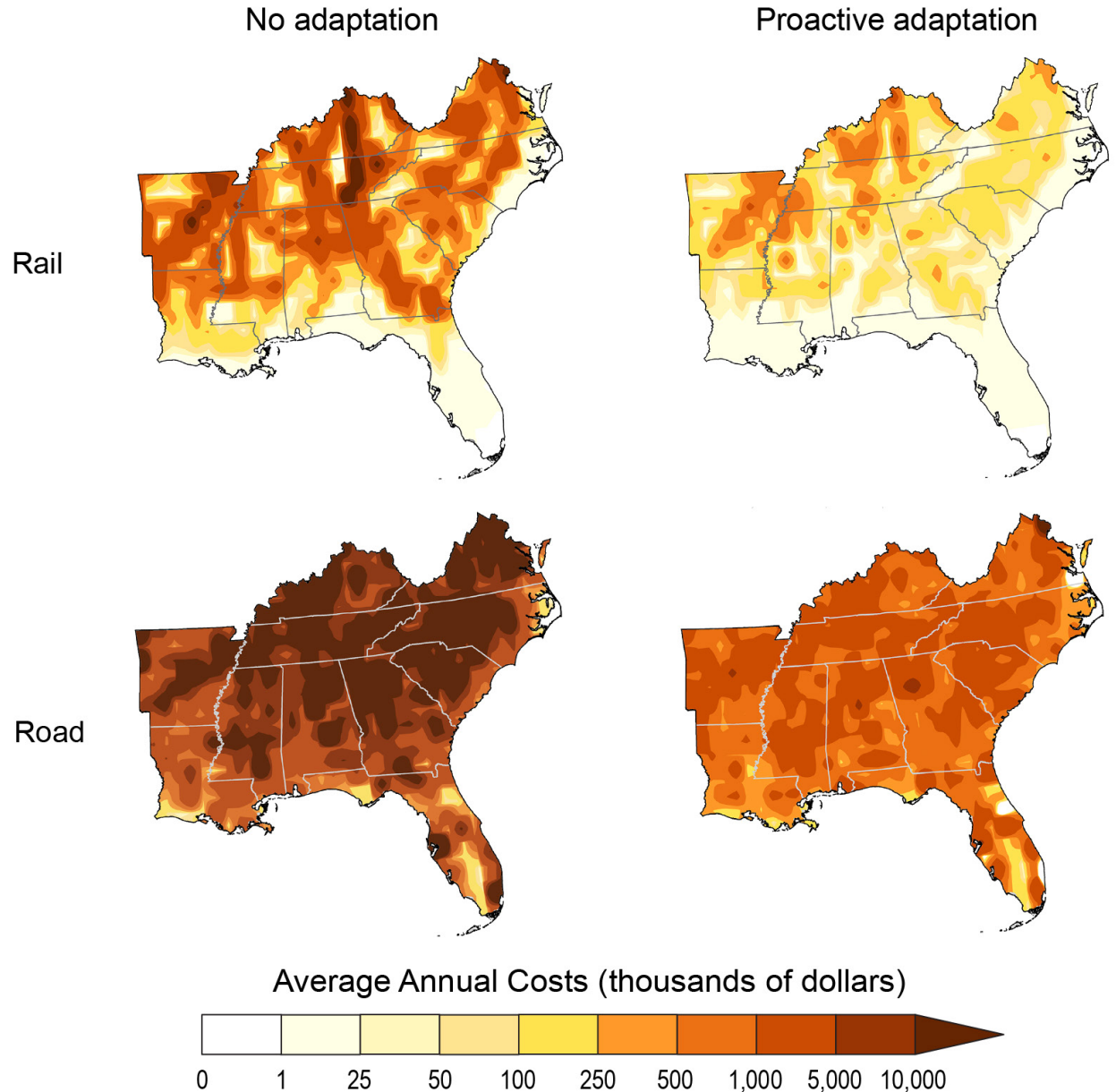
Changes in temperature, drought, extreme rainfall, and sea levels are already threatening the Southeast's agriculture and other food-related systems (*likely, very high confidence*). Moreover, these climate-related hazards are expected to worsen with every increment of global warming, disproportionately harm farmers and small-scale operations, and increase the competition between urban and rural communities for valuable resources such as water and land (*high confidence, very likely*). However, innovative agricultural techniques such as precision farming show promise for adapting to future climate changes in the region (*likely, high confidence*).



Proactive Adaptation Offsets Future Transportation Infrastructure Costs

Proactive adaptation to climate change could save millions of dollars in future transportation infrastructure costs.

Figure 22.15. Future climate change impacts (under RCP4.5) may cost US transportation infrastructure billions in damages by 2050, with especially high costs in the Southeast. The **left panels** show the additional annual average system costs (as compared to 1986–2005 in 2018 dollars) to rail infrastructure (**top**) and road networks (**bottom**) in 2050, assuming no adaptation. Proactive adaptation—anticipating climate risks and investing up front in strengthening these systems before damage occurs—could reduce significantly, but not eliminate, these costs (**right panels**). Proactive adaptation strategies include temperature sensors for railroad tracks and working to reduce disruption times for roads undergoing repairs. Adapted from Neumann et al. 2021 [CC BY 4.0] (see full chapter for detailed citation).



Recommended Citation

Hoffman, J.S., S.G. McNulty, C. Brown, K.D. Dello, P.N. Knox, A. Lascurain, C. Mickalonis, G.T. Mitchum, L. Rivers III, M. Schaefer, G.P. Smith, J.S. Camp, and K.M. Wood, 2023: Ch. 22. Southeast. In: *Fifth National Climate Assessment*. Crimmins, A.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, B.C. Stewart, and T.K. Maycock, Eds. U.S. Global Change Research Program, Washington, DC, USA. <https://doi.org/10.7930/NCA5.2023.CH22>