

Harmonizing Climate Change Mitigation and Adaptation in Transportation and Land-Use Planning in California Cities

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Recent extreme weather events in California—wildfires, drought, and flooding—make abundantly clear the need to plan effective responses to both the causes and consequences of climate change. A central challenge for climate planning efforts has been identifying transportation and land-use (TLU) strategies that simultaneously reduce greenhouse gas emissions (“mitigation”) and adapt communities so that they will be less severely affected by the adverse impacts of climate change (“adaptation”). Sets of policies that collectively address both mitigation and adaptation are known as “integrated actions.”

This study explores municipal climate planning in California to determine whether cities incorporate integrated TLU actions into their plans, identify the potential drivers of conflict between mitigation and adaptation in municipal plans, and enumerate ways the State of California can help cities more effectively incorporate integrated TLU actions.

Study Methods

The study methods consisted of a detailed analysis of climate planning documents from 23 California cities with particularly long histories of climate planning, plus interviews with 25 local, regional, and state officials who work on climate planning.

Key Findings

Analysis of both planning documents and interviews with climate professionals yields three key findings:

1. **For the TLU sector, city planners and city planning documents predominantly emphasize mitigation strategies rather than adaptation efforts.** Because the first generation of climate action plans focused primarily on mitigation of greenhouse gases, adaptation strategies have not yet been effectively or fully combined into mitigation plans in many cities. Although climate resilience plans have become more common recently, hazard mitigation plans

are still the most prevalent type of plans to address adaptation needs.

2. Although desirable, integrated actions are the exception, not the norm. Some cities are incorporating integrated actions, but this is often not done explicitly, or within the same policy, or within the transportation sector.

Promisingly, two cities with recently updated climate action plans explicitly focused on the need for integrated actions. For example, one city paired expanding and improving alternative transportation infrastructure and facilities (mitigation) with improving the city's capacity to withstand flooding conditions (adaptation). Another city highlighted the mitigation co-benefits of adaptation efforts as a part of the analysis of policy alternatives.

3. Most cities addressed climate mitigation and adaptation in separate efforts, potentially reducing synergies between the two types of action and even creating conflicts. For example, cities are often promoting higher-density, mixed-use, transit-oriented development in downtown cores, without necessarily emphasizing the conditions necessary to ameliorate the urban heat island effect.

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Policy Implications

The study findings suggest promising steps that both municipal and state governments can take to support integrated TLU actions at the local level. For example, cities can proactively link the content of climate mitigation and adaptation plans, a process that will require building the capacity for cross-collaboration between the various departments in charge of developing, implementing, and monitoring climate-related plans. As for the

state government, it can provide funding specifically for planning and implementing integrated actions, offer technical support to help municipalities adopt programs and projects that produce integrated mitigation and adaptation benefits, and fund research in the area of integrated actions.

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To Learn More

For more details about the study, download the full report at transweb.sjsu.edu/research/1856



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