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ABSTRACT

Anthropogenic carbon dioxide (CO_2) and greenhouse gas (GHG) emissions may soon exceed the sustainable scale of the earth's ecological waste absorption capacity, and past a tipping point at which point there exists the possibility of positive feedback loops that could would result in rising sea levels, the rapid loss of sea ice, chaotic changes in climate, and constantly shifting shorelines. Reducing the anthropogenic flow of GHG emissions in the transportation sector is recognized as a key component of mitigating climate change; this may take the form of voluntary actions, (e.g. behavioral change) or governmental policies that reduce greenhouse gas emissions. This paper examines three problems surrounding transportation and climate change: (1) Individuals do not often consider climate change a salient issue; (2) motor cars are the most preferred mode for passenger road transport but the second greatest GHG emitters; and (3) a significant shift towards alternative and sustainable transportation modes is a challenging and complex endeavor. This paper utilizes a multivariate binary logistic regression model to address the issue of microaccessibility and modal choice and the question of which specific community characteristics might contribute to a modal shift towards low-carbon modes such as biking, walking, or public transit. Results and conclusions are forthcoming.