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Editorial: Consumption of cities under the effects of COVID-19 and climate change

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Editorial on the Research Topic

Consumption of cities under the effects of COVID-19 and climate change

The editors of this Research Topic would like to thank having the opportunity to review a wide range of captivating articles within the field. In this editorial, we summarize the main findings and contributions of each of the accepted articles.

The majority of greenhouse gas emissions come from activities in cities and shifting their activities toward reducing their environmental pressure is becoming a paramount goal for cities to achieve sustainable development. Recently, studies have suggested that during the COVID-19 pandemic, CO₂ emissions have temporarily declined when human mobility was constrained after countries implemented lockdown and state-of-emergency measures to keep people in their homes at longer hours (Le Quéré et al., 2020). Aruga et al. (2021) also find that in the US, France, and India, level of CO₂ emissions decreased as hours of stay-at-home increased during the COVID-19 pandemic. Such reduction in CO₂ emissions during the pandemic is likely related to changes in the activities in the cities. The COVID-19 pandemic is also known to have affected people's consumption behavior in cities. For example, Aruga et al. (2022) suggest that the state of emergency rules in Tokyo led to a decrease in major fresh vegetable wholesale prices, which is likely related to a decline in the demand from restaurants. The Research Topic is aimed to capture such changes in the behavior of cities related to the COVID-19 pandemic.

Antonides et al. investigate how the COVID-19-related lockdown in the Netherlands has affected the financial behaviors and perceptions, happiness and emotions, social relations, and health and health-related behavior of Dutch citizens. The financial situation was not adversely affected by the pandemic likely due to governmental support for income. The effect on happiness and emotions and social relations revealed that people living in urban areas tended to have a lower level of happiness during the lockdown. Meanwhile, the impact on health and health-related behavior from the first lockdown was not found in the study.

Rouleau et al. develop a decision support tool called the Climate and Ocean Risk Vulnerability Index (CORVI) to measure the level of resilience of a coastal city facing climate risk. It shows the use of CORVI in Castries, Saint Lucia, and Kingston, Jamaica, where data to quantify the climate risk of coastal cities is not available by testing the baseline for the structured expert judgment method, which is a technique used to quantify risk. The study identifies the importance of having support for project buy-in from the government and stakeholders. Furthermore, it became evident that it is crucial to translate risk scores identified with CORVI into meaningful action.

Arroyo-Lambaer et al. examine the possibility of implementing green labeling for urban agriculture in Xochimilco, Mexico to preserve chinampas, a traditional agroecosystem known to be environmentally friendly and sustainable, which dates to pre-Hispanic times. Through cognitive mapping and network analyses based on related literature and interview with chinampa producers, the study finds that consumers' unwillingness to pay a fair price to conserve chinampas and the cost to maintain soil and water quality makes it difficult to implement green labeling. The study indicates the importance of strengthening a resilient and sustainable food production system where not only government and private sectors are supporting the system but broader sectors like agriculture, health, culture, and environment are interconnected to preserve the traditional agricultural system in the urban area.

Finally, Ito et al. analyze how consumer food demand was affected during the COVID-19 pandemic in the Tokyo metropolitan area. Comparing the own elasticity for the years 2019 and 2020 on 25 food items including fresh and daily, staple, and storable food and food consumed outside (contains delivery and takeout food), the study finds that expenditure on food ingredients increased after the spread of the COVID-19 pandemic. The study also reveals that expenditure elasticity for storable food became more elastic which likely implies that households tried to hoard storable foods when prices became low to prepare for the pandemic. As expected the consumption of eating outside declined in 2020 indicating that people refrained from eating outside during the pandemic.

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Author contributions

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Conflict of interest

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