GREEN PUBLIC SPACES

Keys to adapt to a world with pandemic risk

PEAK
URBAN
CONTRIBUTES

3 GOOD HEALTH AND WELL-BEING

11 SUSTAINABLE CITIES AND COMMUNITIES

rise   PEAKUrban   UNIVERSIDAD EAFIT

Vigilada Mineducación

Highlights

1.

Green spaces are a crucial element in promoting health and well being in cities.

2.

In Cali, higher levels of neighborhood greenness are associated with better physical health and fewer people reporting physical illness.

3.

In Medellín, higher levels of neighborhood greenness are associated with lower mortality rates from heart diseases.

4.

In Medellín, inequality in health outcomes by economic strata seem to be decreasing since 2015, perhaps due to public interventions in the most vulnerable areas.

5.

In Cali, people from low socioeconomic strata are the least benefited in the availability of green spaces compared to those from middle and high strata.

Because of the COVID-19 pandemic and mandatory isolation, people's physical and mental health as been affected by impediments to travel or engage in physical activities outside of their homes. As a result, it is now even more relevant to carry out research on such topics, which encourage the well being of the population through the use of green spaces.

Having a park nearby home encourages individual behavior to walk, breathe cleaner air, and exercise more often, and such behavior is a crucial component for better physical and mental health.

Most of the research is aimed at understanding the role of green areas in the physical and mental health of residents concentrated in developed countries. However, we do not know much about the availability of green areas in developing countries and how they affect the life and well-being of residents.

Green space is a crucial element in promoting health and well-being in cities

Methodology

Due to the above, the objective of the PEAK Urban research in Colombia is to shorten the gap between the least favored areas. That's why researchers are now using satellite data combined with population surveys to calculate neighborhood vegetation using the Normalized Difference Vegetation Index (NDVI). This research informs directly to policymakers on how to invest and allocate resources to improve the quality of life of the population directly. The results of this research are relevant to inform evidence-based policymaking in Colombia and cities in the global South. While at the same time, it informs citizens and different stakeholders to advocate on the investment of open and green space.

This research is particularly relevant in the post-pandemic. Promoting exercise and physical activity is now one of the most used strategies around the world for keeping the population healthy, physically, and mentally.

However, the greatest challenge for urban planners and public policy makers at the city level lies in the equitable

distribution of green spaces and parks in cities in the Global South.

Finally, PEAK Urban research on Green Space aims at contributing to the discussion of the post-pandemic strategies to improve people's health and well-being.

located in the southern part of the city, than in the more deprived areas located in the center and the eastern part of the city.

In conclusion, there is greater availability of green spaces in high-income neighborhoods located to the south of the city than in the most disadvantaged areas located in the center and east of the urban area.
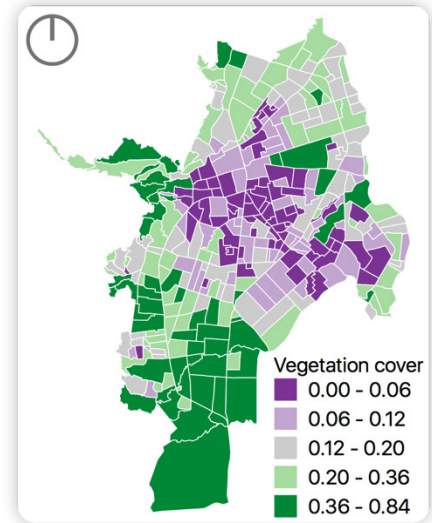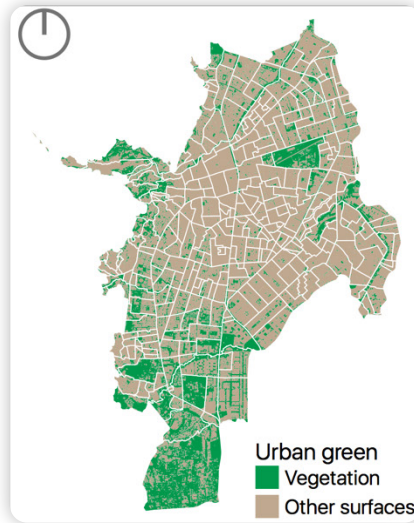
Spotlight

Research in Cali

Using this methodology, PEAK Urban researchers are studying neighborhood greenness and its relationship with physical and mental health in Cali, the third-largest city of Colombia.

Results from this research indicate that higher levels of neighborhood greenness are associated with better physical health and lower days of people reporting feeling ill. Stratified results indicate that people from middle to high income beneficiate more. This result may underline the significant disparities in green space availability within the city. There is more green space available in the upper-income neighborhoods,

In Cali it became evident that, according to spatial distribution, people from the lowest socioeconomic bakcground are the least benefited in the availability of green spaces with respect to those from the upper and upper-middle ones

rise   PEAKUrban   UNIVERSIDAD EAFIT
Vigilada Mineducación

Cali: Original PlanetScope image (left), urban green areas (center), and differences in urban green cover by neighborhood in the urban area of Cali(right).

Spotlight

Research in Medellín

PEAK Urban researchers are also using this approach to assess long-term green space availability for populations with different socioeconomic status in Medellin city, the second largest city in Colombia; and to study the relationship between urban green and other features of the built-environment and heart diseases using public health records.

Results from this work indicate that higher levels of neighborhood greenness are associated with lower mortality rates from heart diseases. Similar to the situation in Cali, there are disparities in green space availability throughout the city. Middle socioeconomic status people had less green space in their proximity between 1984 and 2005 than low and high socioeconomic status people. Then the low socioeconomic group became the least favored. The disparities increased from 1984 to 2015, but then started to decrease in recent years. The trend observed from 2015 indicates that urban interventions and contemporary planning tools put in place seem to be reducing the disparities.

The implications for the policymaking process of this research is that more

efforts would be needed to integrate green infrastructure into urban planning in middle and low-income neighborhoods in both cities.

Between 1984 -2005 in Medellín people of medium level had less green areas as opposed to those of low and high level
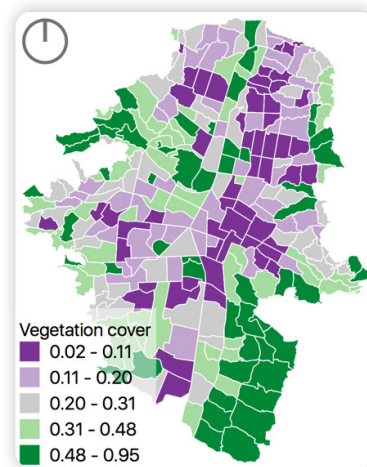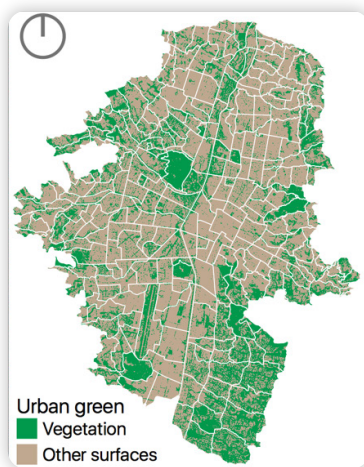
Medellín: Original PlanetScope image (left), urban green areas (center), and differences in urban green cover by neighborhood in the urban area of Medellín (right).

Green spaces have a great impact on people's health

Higher levels of green spaces

Lower mortality rates from heart disease

Scientific team

Lina Martínez, Public Policy Observatory, ICESI University

Andy Hong, Deep Medicine, Nuffield Department of Women's and Reproductive
Health, University of Oxford, Oxford, UK

Jorge E. Patiño, Research in Spatial Economics (RiSE-Group), Department of
Mathematical Sciences, EAFIT University

Juan C. Duque, Research in Spatial Economics (RiSE- Group), Department of
Mathematical Sciences, EAFIT University

Kazem Rahimi, Deep Medicine, Nuffield Department of Women's and Reproductive
Health, University of Oxford, Oxford, UK