

SEPTEMBER 2020

## Did you know about it?

### There is a lot of science in the study of cities

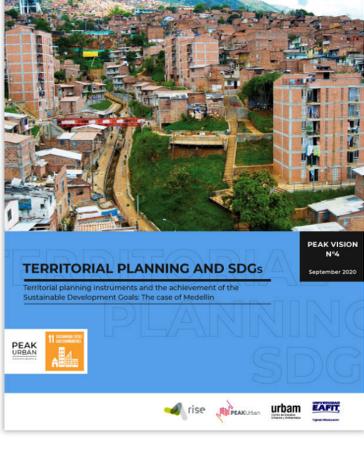
There is a lot of science involved in the study of cities. For instance, when we think about cities' optimal size and shape, the maximum occupation density, the most efficient streets' width, and their relationship with buildings' heights. The minimum networks necessary for economic and natural connectivity, the landscape forms, the distribution of rainfall and its relationship with the drainage networks' dimensions. The slope of the terrain and its influence on the risks of flooding and mass movement. All this contains what is called: The "science of cities". Cities are a dynamic and open socio-ecological system that depends on multiple systems, and that is why it must be analyzed as an integrated organism, subject to the principles of ecology and the postulates of system dynamics. The city is a thermodynamic system whose flows of matter and energy are governed by physical laws; the city is a permanent economic production system and exchange that must be studied using economic rules. The city is a socio-spatial system that, to be understood and planned from modern governance approaches, requires the social and geographical sciences. Cities contain an extensive network of parks, green areas, biological corridors, rivers, neighborhoods, roads, infrastructures, and services that follow the mathematical frameworks of network theory and topology. Thus, cities with their citizens and the territories where they exist are complex systems that must be investigated and planned using transdisciplinary techniques that ethically use the best of knowledge, information, science, and technology.

To learn more about Science of Cities, we recommend reading these three authors: Alan Wilson (mathematician), Michael Batty (urban planner and geographer), and Geoffrey West (physicist)

## Know what we do...

### PEAK Vision

Series of articles documenting the research we do accessible to all.



### Territorial planning and SDGs

PEAK Vision N°4

This article addresses how the SDGs (Sustainable Development Goals) are linked with existing territorial planning instruments and how the connection between these elements can guide development plans and define the policies of local and national administrations.

[Read more](#)

### PEAK briefing

Reports of academic research produced by our team.



### Grounding Sustainable Development Goals (SDGs) through existing territorial planning instruments

PEAK briefing N°2

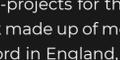
This report discusses how the Sustainable Development Goals (SDGs) can be achieved in a city by connecting them with existing territorial planning instruments. When this connection is made effectively, progress towards achieving the SDGs can transcend the development plans and political priorities of administrations without affecting their autonomy.

[Read more](#)



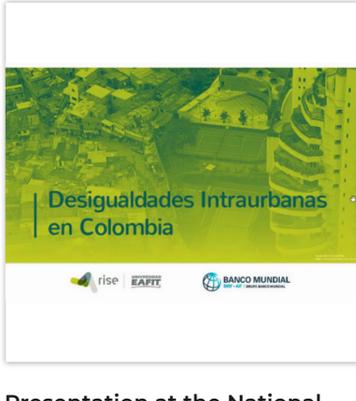
the sPEAKers Podcast

PEAK Urban and macro-projects Episode 1



In this podcast is about macro-projects for the study of cities. In addition, the inception of the PEAK-Urban project, a network made up of more than 40 researchers affiliated with universities around the world such as: Oxford in England, Eafit in Colombia, the University of Cape Town in South Africa, Peking University in China and the Indian Institute of Urban Settlements. Guests in this episode are: Juan Carlos Duque, professor of the Department of Mathematical Sciences of the PEAK board of directors, Francisco Obando, Coordinator of policies and management of the Peak Urban and Informal Cities programs from the Oxford Martin School of the University of Oxford. Elkin Velázquez: Director of UN Habitat for the Americas and the Caribbean.

## Latest news



### Presentation at the National Planning Department (DNP)

September 2, 2020

There is a clear weakness in the targeting system as a tool for targeting subsidies to utilities, making this system fiscally regressive. In our study, we evaluate the mismatch between the adjusted multidimensional poverty index and the strata in each of the Colombian municipalities using information from the 2018 Population Census.

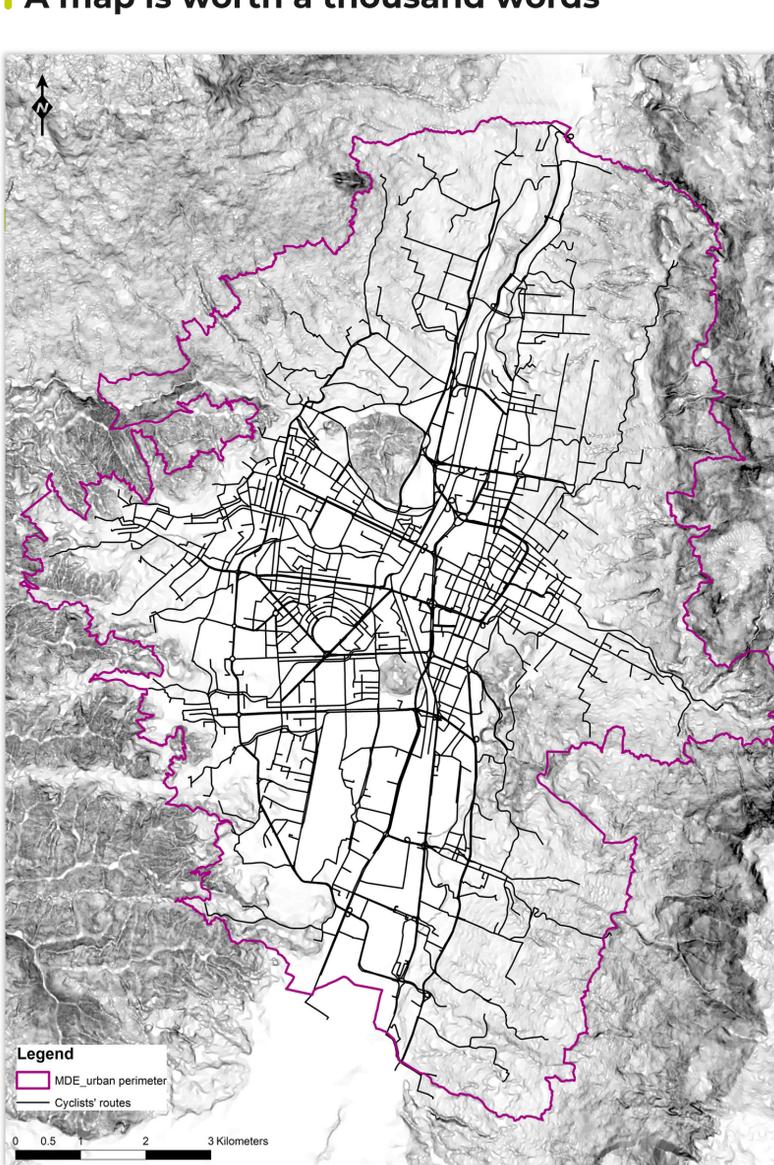


### Let's land the SDGs

September 28, 2020

In September 28, Santiago Mejía Dugand, a PEAK-Urban researcher and EAFIT teacher, spoke on City Monday about the location of the (SDG), taking into account the New Agenda of the United Nations and its contextualization in the territory. One of the main questions addressed in the forum referred to the design of new instruments for the localization and implementation of SDGs or the use of existing ones. City Monday is an initiative promoted by citizens and developed since 2013. It takes place every Monday and since then, it has been replicated in many cities, addressing various issues with a special emphasis on peace, coexistence and security; urban sustainability; governance, democracy and open government. Currently the talk takes place at 7:00 pm on Facebook Live on Monday City.

## A map is worth a thousand words



### Distribution of routes used by cyclists in Medellín

Various cities, as well as Medellín, are developing actions to increase the use of the bicycle and guarantee the safety of cyclists, taking into account its benefits environmental, social (Pucher & Buehler, 2012). In Medellín, an urban cyclist travels a little more than 4km on average in each trip, which can be done in 20min or less. A study recent Ospina et al. (2020) points out that, with some exceptions, the vast majority of routes taken by cyclists are concentrated in "flat" areas of the city where pending are below 6% (see attached map), recognized as pending reasonable when it comes to cycling for everyday commutes in the city (CROW, 2011). Likewise, the study indicates that some users, particularly some women, are willing to deviate from the most direct route with the intention of using bicycle paths or more quiet. However, it is also found that said willingness to deviate on the part of users has a limit and that when they have to deviate a lot, they decide not to make the trip by bicycle, or travel very short distances. This indicates that it is necessary to plan and build direct and safe routes when it comes to motivating people to use the bicycle as a mode of urban transport.

### References

- CROW. (2011). Manual de Diseño para el Tráfico de Bicicletas. Retrieved from www.crow.nl
- Ospina, J. P., Botero-Fernández, V., Duque, J. C., Brussel, M., & Grigolon, A. (2020). Understanding cycling travel distance: The case of Medellín city (Colombia). Transportation Research Part D: Transport and Environment, 86(102423), 1-15. <https://doi.org/10.1016/j.trd.2020.102423>

- Pucher, J., & Buehler, R. (2012). City Cycling (1st ed.; J. Pucher & R. Buehler, eds.). Cambridge, Massachusetts: MIT Press.



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