

COLOMBIA, A COUNTRY WITH MANY SHADES OF GREEN

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Colombia's work in environmental areas is classed as worthy of merit by Francisco Javier Escobedo, an expert who has had the opportunity to zoom in close on these issues in a number of the world's countries. He highlights the country's policies but would give its inhabitants a touch more 'naturalism'.

The knowledge of Colombians on common details of biodiversity is special. Although they do not understand the ins and outs of the concept, or know how to explain it, they imagine it, relate it to nature, birds, flora, and fauna. And they are aware they have a unique resource in their country.

This was one of the first things that struck Francisco Javier Escobedo, professor at the Faculty of Natural Sciences and Mathematics at the Universidad del Rosario, when he arrived in Colombia two years back, having been around the globe a fair bit. This was due to his work taking him off to different spots on the planet to research environmental issues: pollution in Mexico City and Santiago de Chile; the function of trees in Shanghai that capture carbon dioxide; emissions from transport systems in Bolzano (Italy); the importance of forests

in Florida (USA); and vegetation from Medellín to as far away as Sri Lanka.

A forest engineer with an MS in Watershed Management from the University of Arizona, plus a PhD in Forest Resources Management, Environmental and Natural Resources Policy from State University of New York, College of Environmental Science and Forestry (SUNY-ESF), this professor is qualified enough to point out Colombia's qualities in environmental topics, as well as to level certain criticisms that might help the country improve its relationship with the green stuff that covers the majority of its territory and surrounds 75% of its people.



Escobedo's work is focused on forests, human beings, and the relationship between them. It has led to him collecting data that can even contradict some of the perceptions of big city dwellers.

For example, are you one of those folk who prefers to walk on paved sidewalks, avoiding green or arboraceous areas for fear of being robbed? Well, it turns out that those spaces you shun record lower rates of criminality and homicides, according to a study carried out in Bogotá and now awaiting publication. In fact, the more trees, and the bigger they are, the fewer the problems of that troublesome kind.

The expert does point out that this is a statistical correlation, so planting trees is not the solution to citizen safety problems in cities. Yet these data are interesting, and they come from a larger study that uses the city tree census compiled jointly with the District Environment Office. "Have you noticed that Bogotá's trees have been given tags? By using this series of registers for each public tree in the city (compiled by the Botanic Gardens and the Environment Office), we have been studying the dynamic between the benefits they bring and the cost they represent. We measure the CO₂ they capture, how much they decontaminate, where there are more trees, where there are less, why, how they relate to the social strata, equality, use of land..." The researcher underlines that Bogotá is one of the few cities that has an inventory of its trees.

EDIBLE GREEN INFRASTRUCTURE: SO, HOW DO YOU EAT IT?

Escobedo is aware that the kind of language tossed around in the academic world can set up barriers between researchers and ordinary citizens. This is why he makes a big effort to explain each concept in the clearest and most precise way possible. One such term is 'edible green infrastructure', which

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was the focus of his research agenda two years ago in Argentina and Sri Lanka.

"We have grey infrastructure, in other words highways, the roads network, wiring, electricity, water, the sewer system; this fulfils the task of ensuring the city functions well. Then we also have the green infrastructure—the opposite of the grey one—comprising trees, wetlands, our land [...] They can also fulfil the same functions: they aid water infiltration, purify the air, reduce the temperature, and improve human wellbeing," he explains.

Escobedo specifies that the term 'green infrastructure' is employed as a metaphor to better get across to people a concept the scientific world would include in a more difficult glossary, with designations such as 'ecosystem services' and 'biogeochemical cycles'.

"One of the great advantages of the green infrastructure," he continues, "is that it means far fewer energy supplies, no oil, petrochemicals, cement, or concrete, and so on. When you use trees, pasture, soils, those ecological processes take place in a more sustainable way: there are no emissions, nor pollution. They are self-regulating."

It is a trending term and seems innovative, but Escobedo stresses that, in practice, it has always been part of development in cities. He cites the case of chinampas, urban arable areas that were in existence during the splendour of the Aztec Empire, between the 14th and 16th centuries. In more recent times, planners used the term on referring to design in cities that includes parks and wetlands, in addition to buildings and roads. Escobedo points out, however, that today a 'green infrastructure' means more than using vegetation for the sustainable improvement and development of urban surroundings.

The word 'edible' is added to the concept in reference to the production of food close to or within actual cities. "For example, in Cuba, and in some cities in Argentina during the economic crisis, food production became a priority. And the nearer food is to those who consume it, the better: less distance, less transport, fewer CO₂ emissions, less pollutants, more food safety."



The need to create urban vegetable gardens became evident during WWII, and in other periods of history, but beyond the production of food, the concept has a far more environmental slant because it involves regulation of water and temperature: decontamination.

In research carried out by Escobedo and his team, certain benefits were measured, such as the reduction of contaminating elements and the use of organic waste such as compost: "we carried out a full survey in order to find out the effect the edible green infrastructure has, not just on food safety but also on lowering the effects of climate change." The impact is so great that in the city of Rosario (Argentina), in addition to having a Parks Department, there is also an Urban Agriculture Department.

While these studies were not carried out in Colombia, Escobedo is now engaged on a joint project with European researchers to carry out a similar study in Bogotá, although he believes it will be "a little more complicated" to get across the culture of urban vegetable patches in this city. "It would be for domestic use, a niche market. And one of the disadvantages of Bogotá is that it is one of the densest cities in the world, so available space here would be more limited."

BACK TO COLOMBIA ITSELF

Francisco Javier Escobedo's general thoughts on Colombia's handling of the environment allow for optimism. He highlights the country's environmental policies as positive, yet observes highs and lows in the behavior of its politicians and inhabitants. And for this reason he feels there is a need to work harder on Colombians' 'naturalism' (a term he uses spontaneously to refer to civic responsibility in questions of nature).

He also advocates boosting the work of getting science across to people. "When I was in the US, my position meant me

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teaching, researching, and doing outreach. So, all research was not only published in specialist journals, but we also did workshops, environmental education activities, non-technical publications, and this was demanded of you," explains Escobedo. And in his opinion, this would also be good for Colombia.

Just as he acknowledges that the academic world might be a little distant from the man or woman in the street, he also feels that the training makes it more impartial—perhaps "colder" to use his own words—not so emotive.

For this reason, in talks such as those related to plans for the use of the Thomas van der Hammen Forest Reserve in Bogotá, Escobedo does not deny that Mayor Enrique Peñalosa's approaches are practical, even though he communicates them in a very radical and quite undiplomatic fashion. However, this expert is also in disagreement with some equally radical and sometimes unreal approaches by certain environmental sectors.

There is certainly no sign of this 'academic coldness' when Escobedo responds to questions on Colombia's landscapes. Although he has now been in Bogotá for two years, he is still surprised by the different shades of green found in the capital's hills when the sun shines directly on them. "There is a yellow green, blue-green, greenish black...so many green tones," he marvels. And he also admires the landscapes of Eje Cafetero, Chingaza, and Parque Tayrona, among those he recalls having visited.

Despite his yen to improve the 'naturalism' of its people and trust in its institutions, his opinion of Colombia remains positive. "Colombia is truly lovely. And what can be done in environmental spheres is remarkable." ■