



Plan-it Sustainably Column Web Post (Northern News, Dec 2013, p 9, slightly expanded). A media product of Northern Section’s Sustainability Committee, *Excerpted by Scott T. Edmondson, AICP, from a post by Timothy Beatley, October 2, 2013. (See links at end of article.)*

“Too often,” notes University of Virginia Professor Timothy Beatley, “urban greening efforts focus on everything except nature, emphasizing such elements as public transit, renewable energy production, and energy efficient building systems.” But as the human environment becomes increasingly urban — 3.5 billion in 2008, 7.6 billion by 2050 — we need nature in cities even more.

Researchers are finding that nature in the city remedies many environmental, economic, and social-psychological urban challenges. In response to those challenges, new approaches are emerging — [“biophilic” urbanism](#), and [biophilic design](#), along with the larger arena of regenerative urban planning and design. A key principle of these approaches is that contact with nature and the natural world is absolutely essential to a healthy modern urban life. Accumulating [research](#) indicates that we are happier, more relaxed, productive, resilient, generous, and creative when we live and work in the presence of nature.

Beatley’s two-year [Biophilic Cities Project](#) at the University of Virginia’s School of Architecture has been exploring the many creative ways in which cities have been planning for and integrating nature. Partner cities around the world include Singapore, San Francisco, Milwaukee, Vitoria-Gasteiz (Spain), Portland, OR, [Birmingham \(UK\)](#), and Wellington (NZ). Much of the work explores what a biophilic city is, or could be — what it looks and feels like. The project has been developing metrics, assembling data and GIS layers, and producing video stories, such as [Biophilic Singapore](#).

Creative approaches include —

- Designing nature into denser vertical urban environments through a mix of regulations, subsidies, and R&D;
- Green walls and rooftops;
- Networks of urban trail “park connectors”;
- Urban waterway restoration;
- Schoolyard gardens;
- Green streets that collect and treat stormwater;
- Urban forest master plans;
- “Parklet” creation in on-street parking spaces;
- Urban biodiversity planning for natural areas and urban spaces;
- Investments in large, regional networks of urban forests and green spaces, including marine “blue belts”; and
- “Natural capital” programs to create climate-secure “markets” (*i.e.*, climate-proofed



Plan-it sustainably Column (Dec2013)-“Biophilic Urbanism” On the Rise Excerpt
cities) for and through investment in biophilic city assets (investment pool estimated at 21 trillion dollars in 2014).

These approaches are key to shifting from traditional open space provision, natural area restoration, and ornamental landscaping to local ecosystem and habitat creation in urban spaces — from the balcony to the block, and to larger districts, the city, and the region. Green elements at every scale deliver emotional value, but they will also help to mitigate and adapt to climate change, shade and cool urban environments, conserve water and energy, and produce some of our food.

Fortunately, making a city more biophilic will make it more resilient and sustainable ([see article](#)). In fact, biophilic cities may best be understood as the next logical innovative extension of sustainable or “[green](#)” urbanism. In addition, biophilia is a key component of leading-edge approaches to sustainability planning, such as [eco-districts](#) and the [living building/city challenge](#).

The challenge to planners is to envision and innovate policies, zoning, and design guidelines to generate the added prosperity, health, and beauty of biophilic cities. Mexico City has been investing in large green walls and financially supporting the installation of rooftop gardens to improve air quality and food security. Rio de Janeiro’s Tijuca forest (the world’s largest urban forest) protects the city’s water supply. Manila and Mumbai are protecting and restoring mangrove forests as an adaptation to storm surges and sea level rise.

Biophilic cities involve more than the presence of nature in our city planning and design. They include how and in what ways residents engage that nature, and how much they know and care. How to foster a culture of curiosity about nature is key. Creative ideas include summer camping in urban parks, free kayaking on river trails, school-based initiatives that cultivate a love of nature in children at an early age, and urban-based citizen science efforts that involve hands-on enjoyment, recreation, and restoration work.

Other dimensions of a biophilic city include public institutional support in municipal decisions, investments, and annual operational budgets, and incorporating ecosystem services and principles, such as circular material flows and renewable energy, into the urban economy.

Although existing initiatives are impressive, important questions remain.

- How much and what kind of nature is needed in cities?
- What combination of these natural experiences will deliver the greater health and psychological benefits?
- What is the minimum daily requirement of nature?
- Which urban planning tools, techniques, and strategies will be most effective at ensuring this nature exists in our urban future?



Plan-it sustainably Column (Dec2013)-“Biophilic Urbanism” On the Rise Excerpt

- Can cities become engines for the conservation of biodiversity, where planners guide urban development to restore and enhance global biodiversity?

To mark the next chapter — expanding the learning/practicing community of interested and engaged planners, designers, public officials, citizens, and cities — Professor Beatley held a [Biophilic Cities Network Launch](#) for the international partner cities and academic pioneers this past October. To see the agenda, summaries, videos, and other content, or to join the innovation, take the Biophilic Cities Pledge, engage, and begin or continue the work, visit the [website](#).

Timothy Beatley, PhD, is the Teresa Heinz Professor of Sustainable Communities and Chair of the Department of Urban & Environmental Planning at the University of Virginia School of Architecture. [Read his original post](#). Read a review of [Beatley's book](#).