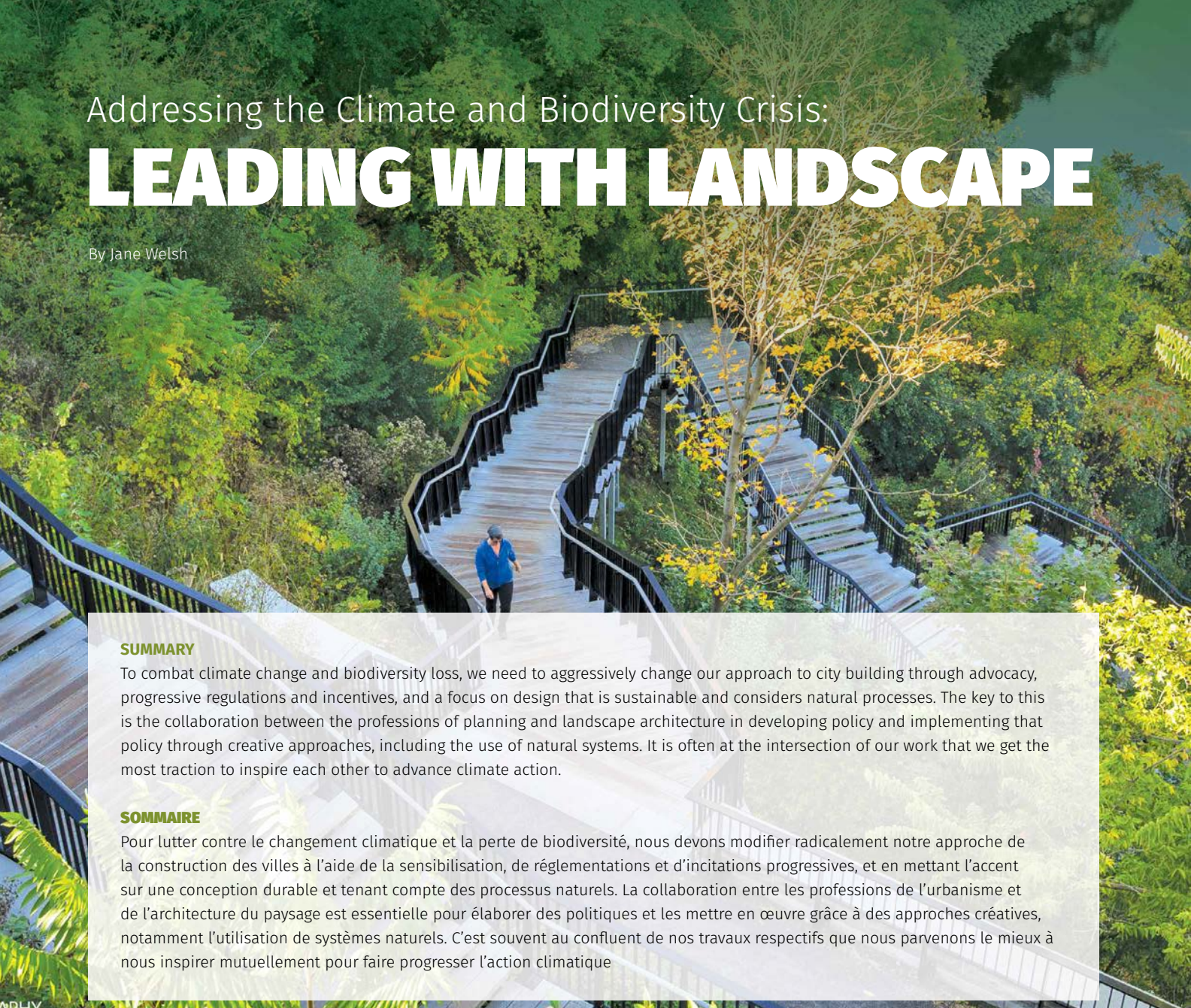




Addressing the Climate and Biodiversity Crisis: **LEADING WITH LANDSCAPE**

By Jane Welsh

SUMMARY

To combat climate change and biodiversity loss, we need to aggressively change our approach to city building through advocacy, progressive regulations and incentives, and a focus on design that is sustainable and considers natural processes. The key to this is the collaboration between the professions of planning and landscape architecture in developing policy and implementing that policy through creative approaches, including the use of natural systems. It is often at the intersection of our work that we get the most traction to inspire each other to advance climate action.

SOMMAIRE

Pour lutter contre le changement climatique et la perte de biodiversité, nous devons modifier radicalement notre approche de la construction des villes à l'aide de la sensibilisation, de réglementations et d'incitations progressives, et en mettant l'accent sur une conception durable et tenant compte des processus naturels. La collaboration entre les professions de l'urbanisme et de l'architecture du paysage est essentielle pour élaborer des politiques et les mettre en œuvre grâce à des approches créatives, notamment l'utilisation de systèmes naturels. C'est souvent au confluent de nos travaux respectifs que nous parvenons le mieux à nous inspirer mutuellement pour faire progresser l'action climatique.

Figure 1: Restore and protect the nature we have. The sensitive design of the Parliament Hill Escarpment Stairway, Ottawa; Civitas Group; 2018 CSLA National Award.

“The most important issue of the 21st century will be the condition of the global environment.

- Ian McHarg, *Design with Nature*, 1969.

To all of us working in the design and planning professions, Ian McHarg's prophetic words take on a powerful urgency today.

Both a planner and a landscape architect, his approach of “conform to, rather than compete with nature”,¹ was revolutionary at the time and had a great

influence on both professions. But over 50 years later we find ourselves in crisis mode, where we need to aggressively change our approach to city building.

Changing requires a collaborative approach between planners and the design professions and starts with shifting our expectations on built form. It also requires

advocacy, progressive regulations and incentives, and a focus on design that is sustainable and considers natural processes.

Collaboration is one key element of change. For over 12 years, the Toronto Green Standard has been requiring (and incentivizing) sustainable performance measures that address the climate

and biodiversity crisis for all new development in Canada's largest city. Putting it together required expertise from many disciplines: planners, lawyers, architects, engineers, foresters, ecologists and landscape architects. Perhaps most important was understanding how to use provincial legislation to achieve the City's sustainability objectives, a planners role, and setting achievable performance measures to manage heat, water and biodiversity on a site, often a landscape architect's role.

Landscape architects also play a critical role in finding creative solutions to meet the Toronto Green Standard performance measures as consultants for development applications. We work with other disciplines to find design solutions that can absorb, detain and allow for the movement of water, lower the temperature of heat islands, enhance urban canopies and provide conditions that support biodiversity.

HELPING NATURE DO ITS JOB

As the profession trained to 'design with nature,' landscape architects have an important role in city building that addresses the climate and biodiversity crisis. We are trained to understand the capacity of the land and how ecological processes – rain, snow, wind and sun interact with the soil, topography and vegetation, and how these will impact the design both now and in the future. Landscape architects work at many scales, from developing enabling policy and guidelines, to designs that protect sensitive landscapes and shorelines, or reduce erosion and impacts of forest fires. Scales from small pocket parks, to urban wetlands, to large-scale master plans, linking the often seemingly disparate elements of large landscapes.

A local high-profile example is the Port Lands Flood Protection Project in Toronto. Led by a team of landscape architects, it is the largest project of its kind in the world.

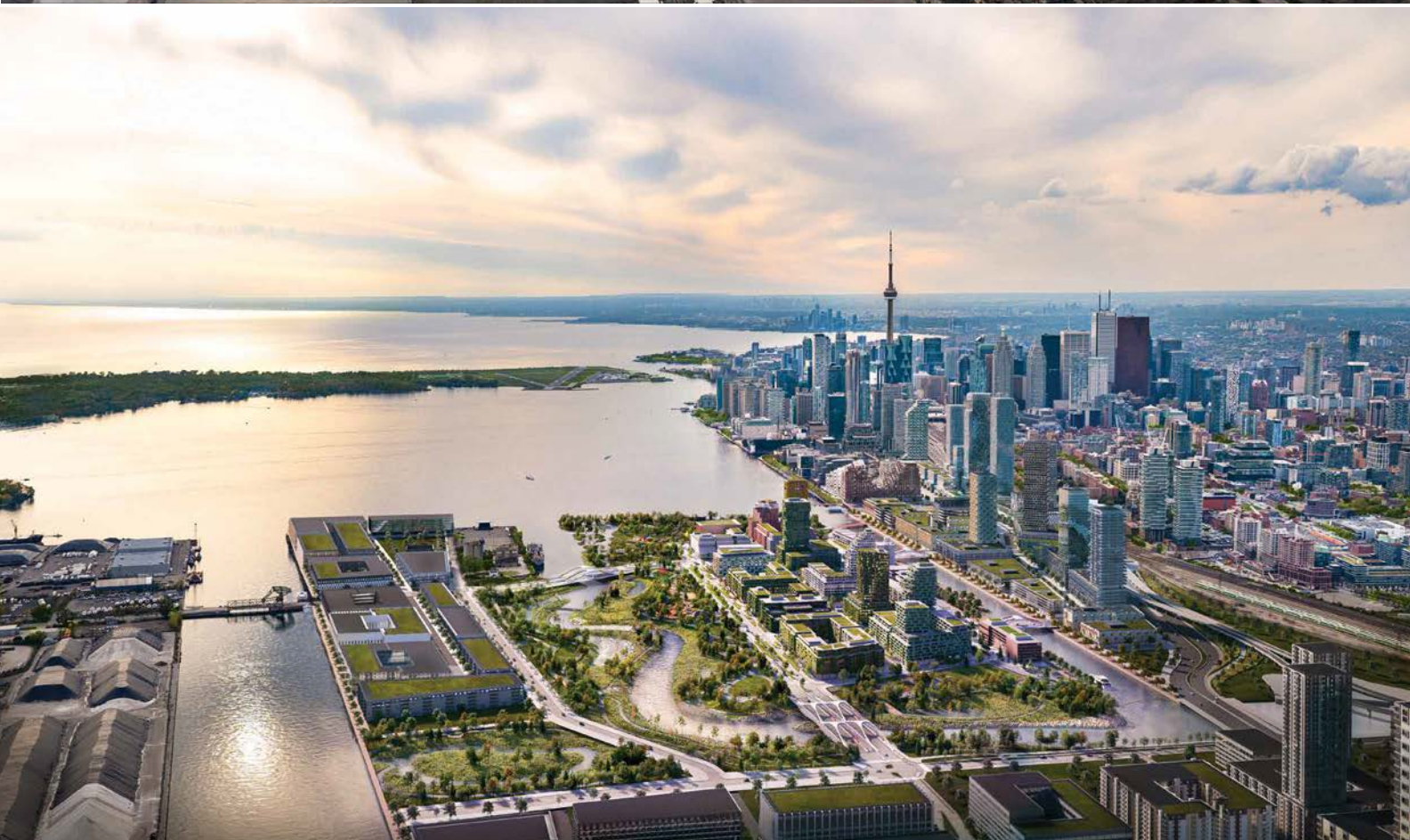
It will ultimately transform the existing mouth of the Don River into a healthier, more naturalized river outlet, bringing nature back to a former industrial site, while providing critical flood protection to 240 ha of Toronto's eastern waterfront. The Environmental Assessment behind the project involved an intense collaboration involving planners, landscape architects and other allied professions.

The Canadian Society of Landscape Architects (CSLA) has been an influential advocate both nationally and internationally, supporting the International Federation of Landscape Architects (IFLA) 2019 declaration of a climate and biodiversity crisis. More than 70,000 landscape architects around the world, including the CSLA, have signed the IFLA Climate Action Commitment to limit planetary warming to 1.5° C.

The CSLA position paper *Resilient, Transformative and Sustainable: A Positive Approach to a Changing Future* offers useful



Figure 2: Designed to restore ecological health while treating stormwater runoff from the adjacent urban area. Dale Hodges Park, Alberta, O2 Planning and Design; 2021 CSLA Awards of Excellence.



Figures 3 and 4: Port Lands Flood Protection, Waterfront Toronto, Before and After (proposed).

advice for all design professions, including planners. It suggests that to ensure a prosperous future within a changing climate, "we must create a society which has an enhanced capacity for resilience, a willingness to transform to a better state, and a commitment to ensuring the long-term sustainability of environments, cultures and well-being".³

The CSLA, through its Committee on Climate Adaptation, has also published two additional resources that are downloadable from its website: *Adaptation Primers* is a set of four introductions to climate science, policy and planning approaches to mitigation and adaptation opportunities for building resilience, enhancing public well-being, and options for responding

to rising waters. *Nature-Based Solutions by Design* addresses climate challenges such as biodiversity loss, food security and accessibility to clean water.

CONCLUDING THOUGHTS

Combating climate change and biodiversity loss are complex problems that need all of us to take action. It is often at the intersection of our work that we get the most traction to inspire each other to advance climate action. Working together, planners and landscape architects can be better equipped to address the social and ecological complexity of the climate and biodiversity crisis. We welcome the opportunity to share our work and to collaborate with other professions.

Jane Welsh, OALA, FCSLA, is the past-president of the Ontario Association of Landscape Architects and current Chair of the CSLA Committee on Climate Adaptation. In 2018, she was elected to the CSLA College of Fellows. Jane holds a degree in Landscape Architecture from the University of Guelph and a Master's in Planning from the University of Toronto. She is Project Manager of the Environmental Planning unit of Toronto City Planning responsible for developing environmental policy and regulation to address climate change in new development – including the Toronto Green Standard, Green Roof Bylaw and Official Plan Environment and Climate Change policies. ■

REFERENCES

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