

## **ECOURBANISM WORLDWIDE INTERNATIONAL ADVISORY GROUP** Report on Inaugural Workshop June 1st, 2015

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## Introduction

The inaugural workshop of the International Advisory Group (IAG) of the Ecourbanism Worldwide project was held on June 1st 2015. The IAG is comprised of a group of leading practitioners and researchers working at the forefront of ecourban development, sustainable neighbourhood planning and design. This first meeting allowed us an opportunity to begin a dialogue among practitioners and researchers in this evolving field, sparking our collective thinking about what is missing from our understanding of trends in ecourban development internationally. An additional, immediately practical, objective was to have a constructive discussion about the need and specific values of a possible new web compendium resource in this area, that the project could create. As we move forward with valuable insight and lessons from this day, we continue to connect with leading professionals and researchers in the area of neighborhood-scale ecourban development.

This report provides a summary of the discussions and key insights of the day, as well as an update on the Ecourbanism Worldwide research project. With this report, we hope to engage a growing international circle of critical and reflexive contributors in an ongoing and collaborative exchange about ecourbanism at the neighbourhood scale.



A special thank you to the sponsor and host of the Ecourbanism Worldwide inaugural workshop, Perkins + Will Vancouver.

This project is supported by SSHRC Insight Grant 435-2014-0465.



## The project

Ecourbanism Worldwide is a 5-year research project (2014-2019) led by Dr. Meg Holden in the Urban Studies Program at Simon Fraser University. The project investigates what is happening to cities on the ground in model sustainable neighborhoods, in urban infill settings worldwide. It examines the explosion of neighborhood-scale eco-themed urban development in different world regions.

## Key Research Questions

- What are the cases for and against ecourban development?
- What are ecourban trends doing to and for the city?
- What do we need to know about all ecourban developments?

## Targeted Research Outcomes

- To build an online compendium of resources to disseminate knowledge of the governance, design, building, operation and integration of model sustainable neighbourhoods.
- This compendium is to be a living resource of practical relevance, usability and reliability for those working to create better ecourban projects around the world.
- This work will be guided by a multi-stakeholder international advisory group.



Dockside Green, Victoria, BC. Since its launch in 2008, Dockside Green has been hailed in the BC architecture and urban design community for its sustainability features. Yet our discussion at the IAG workshop revealed how much we do not know about the post-occupancy performance of even this hallmark project. (Photo credit: Luc Bagneres)

## International Advisory Group

The multi-stakeholder international advisory group (IAG) of the Ecourbanism Worldwide project serves as a crucial bridge from the academy to the world of urban development and policy practice. The IAG guides the practical 'ground-truthing' of the web resource compendium currently under development, to ensure its utility across the community of reflection on ecourban sustainable neighborhood design practices. They inform the research agenda with professional and practical insight, and help to close the gaps between recognized leading-edge practice, social and policy research critiques, and variable public perceptions of what ecourban neighbourhoods offer to the city and its liveability. In so doing, IAG members engage with one another and with ecourban researchers in peer- and cross-disciplinary learning about pressing urban trends and issues, and emerging solutions and opportunities.

Together, we are building a better common understanding of the differences and commonalities amongst ecourban practices, standards and frameworks, and amongst diverse perceptions of ecourbanism by different groups in the city.

## Workshop Participants

#### Practitioners:

- + Eliot Allen (Criterion Planners)
- + Marta Faarevag (PFS Studio)
- + Rebecca Holt (Perkins+Will)
- + Rachel Moscovich (Integral Group),
- + Martin Nielsen (DIALOG)
- + Wilco Van Bemmel (Dutch Urban Design Centre/Dunefield Consulting)

#### Researchers:

- + Julia Affolderbach (University of Hull)
- + Dominica Babicki (Aix-Marseille University/University of Western Ontario)
- + Robert Boyer (University of North Carolina)
- + I-Chun Catherine Chang (University of Minnesota)
- + Anke Van Hal (Nyenrode Business Universiteit)
- + Lisa Westerhoff (University of British Columbia)
- + Yoshiki Yamagata (National Institute for Environmental Studies)

Participant biographies can be found in Appendix A.

## Workshop format

This workshop, held on June 1st, 2015, served as the inaugural meeting for the International Advisory Group of leading practitioners in ecourban development, providing guidance and advice to the researchers in the Ecourbanism Worldwide research project.

At this workshop, we discussed the perspectives on success of ecourban neighbourhoods, respective roles, as well as the blind spots in the way each of three following key actor groups sees these projects: academic researchers, development professionals, and the general public. We aimed to strike a constructive and collegial tone for ongoing dialogue, to spark our collective thinking about what is missing from our understanding of the trends in ecourban developments around the world, and to identify the specific needs that can be addressed by a new web compendium resource in this focus area.



Important ecological functions are built directly into the Village at Southeast False Creek, Vancouver, BC (Photo credit: Luc Bagneres)



University students discussing ecourban neighbourhood field study observations, Summer 2015 (Photo credit: Meg Holden)

## Workshop discussions

The workshop began with an introduction of the Ecourbanism Worldwide project from Dr. Meg Holden. Dr. Holden provided the theoretical foundation for the project, based on seven extreme principles that inform most ecourban developments. Details of this theoretical framework can be found in the "More about Ecourbanism Worldwide" section of this report.

## Ecourbanism -Seven extreme principles

- Econ-urban
- Ecol-urban
- Living-urban
- Local-urban
- Democ-urban
- Diverse-urban
- Equi-urban

## Why look at ecourbanism at the neighbourhood scale?

During the workshop, discussion turned early on to the question of just what we mean by a neighbourhood scale. In different ecourban development plans, terms such as the "5-minute city" (a 400 m radius), "the 20-minute city" (a 1 mi radius), "the superblock" and "the neighbourhood unit" are prevalent. Together, these indications of spatial scale denote the creation of mixed-use community developments in which residents have the opportunity to conduct all the activities of their daily life inside its boundaries, if they choose. This type of design is associated with claims of social and physical health, aesthetic, democratic and social quality, and value.

A **neighbourhood scale** is one that is sufficient in size, but not too big, for the following elements:

- 24-hour liveability
- Developing a unique identity
- Integrating a spectrum of residents with different economic, cultural, and social backgrounds, ages and health-based needs
- Economies of scale for offering distinctive and unique infrastructure and energy solutions
- Economies of scale for community-building activities, at a balance point of diverse membership and comfortable familiarity
- A school
- Maintaining heavy traffic on the perimeter of the neighbourhood itself
- Inter-generational living

Work from a century ago by Clarence Perry (see Figure 1) suggests that a neighbourhood unit ranges in population size between 5-9000 inhabitants. The specific quantitative definitions of places that meet these expectations may change depending on the specific place and planning context.



CONCEPT OF A "NEIGHBOURHOOD UNIT" IN THE 1920's - 1990's

## Roles, challenges and preferred outcomes in ecourbanism

In the interactive portion of the workshop, participants were asked to consider, in facilitated discussions, the different roles, challenges, preferred outcomes and opportunities for capacity building for different actor groups involved in ecourban neighborhood development. Relevant themes emerged for the different actor groups, with a significant degree of overlapping interest and priorities. We identify some of these key themes below.

## What roles should practitioners and academics play in improving the outcomes of ecourban development?

The role of practitioners	The role of academics
Influencing or shaping perceptions of sustainability in conveying the value of sustainable projects to clients.	Producing lessons in the form of theory as well as case studies of 'what works'. Creative, inspiring and innovative research insights that advocate ecourbanism to practitioners to ground project proposals.
Translating sustainability in business conversations.	Disseminating academic research among professional and civic groups.
Acting as educators to fellow practitioners, developers, as well as the public and government.	Instructing future professionals in ecourban development.
Providing opportunities for academics to stay connected to ecourban development projects over time, even after the end of any formal research agreements.	Making good use of data relating to project development processes and performance. Focusing on various aspects of performance verification, such as data collection and design of metrics in order to track and evaluate progress and performance of ecourban developments over time and across space.

During this discussion, one idea arose which captured the interest of a number of participants: the creation of an "Education Liaison" role within ecourban projects. Participants saw great potential for this role as an official contact point between academic researchers and practitioners in order to further disseminate knowledge.

One way of visualizing the integration of research into the development model can be seen below in Figure 2. Researchers embedded within an integrated project delivery team can contribute to various aspects of the project, with a key role to translate experiences to the next project.



FIGURE 2. THE INTEGRATION OF RESEARCH INTO ECOURBAN DEVELOPMENT MODELS

## Key Idea

The creation of an 'Education Liaison' linking academic research and real-world practice.

## Key insights guiding the workshop discussions

- The success of a new ecourban neighbourhood depends on the perceptions of people with different ideas of model sustainable neighbourhoods.
- Outcomes achieved by neighbourhoods may speak of success to one group but not others.
- For example:
- + Engineers and sustainability planners might be interested in energy performance and carbon reduction whereas residents are more concerned with actual comfort levels.
- + Developers might be concerned with built costs of energy-efficient systems, whereas researchers are more interested in whether such attempts have any influence on individuals' behavior and lifestyle changes.
- + These outcomes converge, intersect and conflict in determining the success of ecourban neighbourhoods.

Participants also identify with a number of gaps existing in ecourban development today, but acknowledged the challenges that accompany attempts to close such gaps.

## What is needed for better understanding and practice of ecourban development, and what are the challenges and potential blind spots?

What is needed for better understanding and practice?	Associated challenges and potential blind spots
Greater partnership and/or closer collaboration between practitioners and academic researchers to overcome knowledge silos that exist in both environments.	Information and data can sometimes be misinterpreted leading to unfounded critiques of development projects.
More interdisciplinary teams and better integration of perspectives and methodologies to translate researchers' knowledge into action and for practitioners to apply to future projects.	More collaboration between academics brings with it the 'burden of research' on practitioners in terms of time and budgetary limitations.
Practitioners need more assistance with communicating the value of ecourban projects, including the intangible or social aspects of neighbourhoods. For example, practitioners need access to narratives of lived experiences in such neighbourhoods, framed in terms of high-quality, vibrant, and culturally-relevant development.	Practitioners should be cognizant of their inherent motives for economic opportunities, business growth and establishing a brand and professional reputation if they are 'selling ideas' and 'thinking for residents' in promoting ecourban development.
Practitioners need more access to learning across time and place, so they can use knowledge and experience from ecourban development efforts elsewhere.	Currently there do not appear to be sufficient resources for facilitating the exchange of knowledge and experience, such as replicable solutions, best practices, transferable models or case studies.
More input and involvement from the local community in ecourban developments.	Practitioners need to be more responsive to social and cultural contexts, and seek localized solutions within their projects

More input and involvement from the local community in ecourban developments.

Greater attention should be paid to residents' lived experiences, especially with new or unusual technological features of ecourban neighbourhoods.

Greater focus on testing the ability to attain new kinds of (e.g. car-free, complete community) lifestyles implied in the promotion of these neighbourhoods.

Greater openness to ecourban innovations to materialize in projects (e.g. green technologies).

Better metrics and clearer industry practices for tracking the performance of projects, both pre- and post-occupancy. More collaboration with local government to institutionalize this approach.

More in-depth examination of the broader questions of the costs and benefits of ecourban development from an urban governance perspective. Ecourban developments imply a shift in the weight of responsibility being shared by the public but this is currently not being explicitly addressed.

Greater consideration of the position of 'home' within people's lives, identities, and economic prospects in determining how much an ecourban neighbourhood can influence change. Practitioners need to be more responsive to social and cultural contexts, and seek localized solutions within their projects.

Would a "user's manual" help residents adapt to new technologies, and would such efforts even be welcomed?

Practitioners need to carefully 'manage' the story in cases where projects fail to deliver on various ecourban promises.

Innovations may be diluted in the design, regulation and implementation process.

Accountability demands policy drivers from various levels of government in requiring and providing oversight on monitoring and disclosing project performance.

Shifting responsibility is fraught. There are different cost calculations for the shared amenities of ecourban developments, so who should be included as beneficiaries? And who is the target population for bearing the cost of such experiments? Over what time period? Who is really enjoying "liveable neighbourhoods"?

For example, in Vancouver a 'tear-down' mentality is prevalent: residents treat their home purchase as a retirement plan, as compared to a sense of home ownership for "generations". Such a consumerist orientation could be a barrier to integrative ecourban developments.

## **Common Perspectives**

Although there were divergent perspectives, participants generally agreed on the following points:

- There is a desire for more acceptance and willingness to experiment with innovative technologies, methods or designs.
- There is considerable value in providing new experiential options for residents in terms of different forms of neighbourhoods, housing and amenities.
- A sense of frustration was felt by participants of the limitations placed on ecourban development by policy and political factors. Such factors are seen as a hindrance to the creation of projects that offer the full suite of possible amenities in prototype ecourban neighbourhoods.

One question that carried throughout the discussion is how to introduce different ways of operating, living and behaving in an ecourban neighbourhood, from the perspective of human-technology interactions as well as human-human and human-environment interactions. How do we change the specific daily behaviours of residents of these new neighbourhoods?

- Participants felt that compared to other consumer goods, people have low interest in educating themselves about the proper use and maintenance of their home, especially in cases where energy-efficiency or eco-materials are introduced. Would an owners' manual help? Could people change their attitude about such a thing, as they might think about the owner's manual for their car?
- Participants also felt there was a lack of attention being paid to how residents are adapting to social expectations that come with such neighbourhoods, for example, of increased recycling rates, reduced car ownership, or even greater community activity participation.

Participants brought up examples of "nudges" that can be built in for behavior change, instead of using explicit instructions to guide integration into the neighbourhood. Such approaches are favoured, although participants recognized that perhaps not all behaviors can or should be "nudged."

## Key Idea

How can different ways of operating, living or behaving in an ecourban neighbourhood be introduced? Use 'nudges'.



*Top:* Outdoor social life in the historically preserved centre of Freiburg, Germany

*Bottom:* Multiple-uses of public spaces in Copenhagen, Denmark

(Photo credit: Charling Li)



## EXAMPLE: Perkins + Will firm-wide Sustainable Design Initiatives accompanied by an emphasis on research

Workshop participants heard from Rebecca Holt, Sustainable Building Advisor at Perkins+Will, on how this interdisciplinary design firm has recognized the potential for increasing the positive impacts associated with their design work. They have embraced a broadened scope in their work to move beyond a simple vision of sustainability, towards a deeper concept of design that takes the specific potential contribution embedded in each site toward a broader restorative and even regenerative relationship with the surrounding city. Perkins+Will is shifting its focus to this fundamentally more humane and fully-integrated strategy for sustainable design. "Our work has impacts on many levels. If we are to fully realize the positive impact we can achieve, we must broaden our view and our goals. We must consider opportunities and impacts not only on an internal basis, but on regional, national and global levels. We must increase our expertise, collaborate with others and advocate for excellence." – Rebecca Holt, Perkins+Will Sustainable Building Advisor

To concretize such ambitions, they have established a Sustainable Design Initiative which works at various scales. At a level internal to the firm, P+W is committing to evaluating and improving internal operations, while at the regional scale they have made commitments to local and regional advocacy and research through partnerships with local universities. At the global scale, P+W is working to develop leadership, policy and advocacy amongst international bodies working at the intersection of design and evnrionmental issues.

Most notably, as a testament to their commitment to research, Perkins +Will has established a parallel, not-for-profit research organization named AREA Research. Perkins+Will staff are seconded to collaborate with higher education and other industry leaders to engage in practical and academic research to advance their sustainable design practice. As such, Perkins+Will is an excellent example of a a company institutionalizing a broad approach to ecourban neighbourhood development, including research collaboration.

## A new online ecourban compendium

In the second half of the workshop, participants switched gears to discuss the question of what existing learning resources on ecourban development offer and how a new online compendium could contribute to gaps in existing learning resources.

In preparation for the workshop, IAG practitioners were asked to complete a questionnaire about resources they rely on to inform their ecourban practice. Members were also given a sampling of existing resources and asked to comment on elements that they find constructive or helpful to their work.

"The reality is that new information comes from multiple and sometimes random sources, and most web sites are only useful once you know what you are looking for." – IAG Workshop Participant

"[There are] quite a few resources that focus on buildings... finding good sources [at the scale of the community/neighbourhood] is more difficult, particularly those providing solid quantitative data on base levels and end results. Also, many sources focus on new projects (instead of renovations or retrofits) and in First World contexts (instead of developing countries)." - IAG Workshop Participant

*"I often start with resources on national/regional policies and statistics and then drill down to particular cities and neighbourhoods" – IAG Workshop Participant* 

## How do you currently find information about ecourban developments?

- Custom-defined Google news alerts
- The URBACT programme
- ICLEI.org
- The American Institute of Architects, Committee on the Environment awards
- Canadian Institute of Planners awards
- Climate & Development Knowledge Network
- American Planning Association Sustainable Communities Division
- Canada Green Building Council website and conference
- International Living Future Institute website and conference
- Planetizen.com
- Web blogs, public environment institutions, newspapers, academic papers
- Twitter
- "My network and best practice reviews conducted for my projects" –IAG Workshop Participant

#### Other web resources

- Green Building Information Gateway and the US Green Building Council
- Urban Land Institute Sustainability Case Studies
- 2030 Palette
- Green Building Brain
- Architizer
- DAC & Cities Danish Architecture Centre
- EcoDistricts Target Cities

- 100 Resilient Cities
- Urbaine.ch
- Transformative Tools
- World Habitat Awards
- UK Building and Social Housing Foundation
- CAT-MED Green Apple
- Común Tierra Project

#### What do these online tools accomplish?

Dr. Meg Holden provided comments on existing resources by providing a classification of their functions in order to stimulate discussion of what our online compendium should aim to accomplish. Different types of functions mean that a different layout and array of information for a compendium would be necessary.

- "Cataloguing" the range of tools and techniques by a series of criteria
   + e.g. Transformative Tools
- "Recognizing" worthy projects
  + e.g. World Habitat Awards
- "Compiling" case studies with perspective
  + e.g. Danish Architecture Centre
- "Pinning" efforts for further networking/community building connections
   + e.g. Green Building Brain
- "Challenging" better practices via explicit framework
  - + e.g. 2030 Palette, Resilient Cities
- "Documenting" an intentional voyage of discovery
- e.g. Común Tierra Project

Building upon this classification of functions and the discussions held over the course of the morning, participants offered thoughtful opinions on what information is already available and what they felt were important elements for a new resource on ecourban neighbourhood development.

What existing resources lack	Opportunity
Transparent documentation of the purpose, sponsorship, and selection criteria for inclusion in the resource	Provide users with an opportunity to assess comprehensiveness, biases, and hence utility of site
Solid quantitative data on base levels (esp. GHGs), implementation and end results	Get beneath and around "hype", positive intentions, and PR with data and multiple perspectives
Project cost, timelines, progress metrics, financial parameters, project parameters	Useful information about projects in addition to single buildings; and descriptive case studies
Basic GIS data such as population, land use	Clear and simple presentation, search categories and good (e.g. map) functionality

## Specific Opportunities for a Web Resource of Ecourban Developments

Renovation or retrofit projects	Include retrofit and restorative projects along with new build
Developing world context	Include projects in the developing world, recognizing that they may use different frameworks and approaches and have different specific goals than those in the developed world*
Critical analyses and sharing of underperformance and failures	<ul> <li>Enhance opportunities to learn from project challenges as well as successes and from existing neighbourhoods:</li> <li>Are there any examples of older, established neighbourhoods successfully achieving what new green neighbourhoods want?</li> <li>Do we document baselines and check against performance in established neighbourhoods (eg. performance on energy/water)?</li> </ul>
Contacts with cities, government agencies, specific projects for further specific information	Opportunity for the role of a project liaison – connect practitioners and researchers – information, experience dissemination, coordination of research efforts
Automatic updates as projects develop (e.g. RSS feed)	Connect ongoing project work with individuals as well as organizations involved to build a collaborative and iterative approach

\* As an early effort to include perspectives from ecourban development within the developing world, we provide reflections from a practitioner perspective in Bogotà from IAG member José Cuello Cuello, in Appendix C. These comments were also provided to workshop participants.

## Diverse and divergent opinions

The discussions of what existing reources lacked and what a new online compendium could offer made partcipants aware of the divergence in preferences and priorities in a web resource compendium. Participants had

## Key Idea

The new compendium should offer critical analysis, including lessons from underperformance or failures, in order to truly advance ecourban practice.

diverse and sometimes contradictory opinions with regards to what would make a compendium useful to their professional circumstances. For example, some advocated for a 'streamlined' listing of projects' key features, while others preferred a tool with comprehensive and extensive coverage of projects. Some made a case for project information being presented in a simplified and objective manner, with consistent structure to the presentation of information to allow for comparison, while others preferred 'deep content and narrative data', with the flexibility to display information in ways suitable to each project.

Participants pointed to the importance of striking a balance between providing 'lessons-learned', project metrics, and other bottom-line results, while acknowledging the difficulties to doing so. They were in agreement that existing resources were too focused on the building scale and identified a need for resources to go beyond buildings to offer insights to the neighbourhood and city scale. A key point from this discussion was the acknowledgement that the new compendium needs to go beyond a focus on intentions and successes. The compendium should offer critical analysis, including lessons from underperformance or failures, in order to truly advance ecourban practice.

## **Concluding Remarks**

By posing research questions that are at the forefront of practice in the planning, design, engineering, marketing, and maintenance of neighbourhood-scale, complete community development, the Ecourbanism Worldwide research project has a compelling reason to strike a constructive relationship with practice. Within the ambitions of this 5-year research project into the extent of the ecourban neighbourhood phenomenon and the lived outcomes of the communities that inhabit these new neighbourhoods, our International Advisory Group is our key means to forge this relationship. The June 1st, 2015 inaugural meeting of this group, as Day 1 of a 2-day workshop that also included research presentations and dialogue as part of the meetings of the Canadian Association of Geographers, hit the tone and fit the spirit of constructive, critical engagement with difficult questions that cut across the research-practice divide, where theory sometimes precedes practice, and practice sometimes outstrips the reach of theory.

We found a great deal of common ground, in considering across researcher and practitioner communities, namely:

- the need to rethink the aspirations of ecourban neighbourhoods in different contexts, considering the policy and governance environment, the built environment and infra structure legacy, and the sweet spot of innovation
- better relationships between researchers, practitioners, regulators and eventual residents have potential value for all parties (e.g. Education Liaison role)
- experimenting with new sustainable technologies, designs, and models of sustainable lifestyles holds potential for more successful projects
- improved knowledge translation, data collection, management, and analysis capacities, in both "hard" and "soft" dimensions of ecourban neighbourhood practice, and generating transparent means of communicating these results, will help advance practice (e.g. new online compendium)

## Future Directions and Staying in Touch

The work plan for the Ecourbanism Worldwide project includes the following objectives, with more detail provided in the next few pages.

- Advance work on the compendium of ecourban neighbourhood projects, with worldwide coverage
- Foster existing relationships and strategically build IAG membership in key areas, such as the diverse contexts for ecourban neighbourhood work within less developed countries.
- Work with the IAG and others to develop a public, web-based version of this compendium for maximum utility in advancing practice and understanding of ecourban development
- Conduct "Phase 2" case studies of a sample of projects, including policy, perception, and international context
- Develop a network of university students engaged in conducting place-based observations in "Phase 2" case studies, and compile this perception data, iteratively
- Conduct a small number of intensive "Phase 3" case studies, involving longer term investigation and comparative analysis
- Disseminate our findings in progress and bring together other researchers and practitioners interested in ecourban neighbourhood work and thought

## How to get in touch

- Visit our Ecourbanism Worldwide Blog
- Contact us directly: ecourban@sfu.ca
- Connect with us through our Academia page

Also, look out for our upcoming special issue in Articulo – Journal of Urban Research (open-access) coming in 2016.

## Thank you to all our participants for attending and sharing with us your valuable insights.

## More about the Ecourbanism Worldwide project

Ecourbanism Worldwide is a 5-year research project (2014-2019) led by Dr. Meg Holden in the Urban Studies Program at Simon Fraser University. The project investigates what is happening to cities on the ground in model sustainable neighborhoods, in urban infill settings worldwide. It examines the explosion of neighborhood-scale eco-themed urban development in different world regions. One of the goals of the Ecourbanism Worldwide project is to provide perspective into what the creation of these new pieces of the city means for the values associated with urban living overall, in their existing social, cultural and political landscapes.

## Why Ecourbanism and Why Now?

Green, eco, net-zero or net-positive, One Planet, low-carbon and carbon-neutral living alternatives are on the rise, in planning and urban design prescriptions, worldwide. Coinciding with this quest for better eco-performance and eco-lifestyles is an emerging sense that the urban neighborhood is the best scale at which to pursue these various eco-goals.

The Ecourbanism Worldwide research project takes stock of these trends in ecourban neighbourhood scale developments in different countries worldwide, seeking the social and political implications of contemporary urban environmental and design theory about what makes places and lifestyles sustainable. At the same time, this work also seeks a better understanding at this moment of intersection between environmental, design and engineering-based perspectives on ecourban shifts and urban, sociological and geographical perspectives on what urban neighbourhoods are worth to cities and urbanites.

Alongside and mixed up within this intersection are opportunities for a critical questioning of the political and economic motivations and processes followed in establishing ecourban neighbourhoods and ecodistricts, the trends toward standardization of models, frameworks, and practices in planning, policy and design for these districts, and the demonstrated results of any of these projects to date.

While governance, policy, design and technological solutions are devised in these urban redevelopment projects, political, ideological and practical challenges are also encountered.

Despite a plethora of assessment frameworks, understanding the outcomes of these redevelopment efforts suffers from a lack of a socially-embedded understanding of what constitutes success in sustainable urban neighbourhoods. From the diverse perspectives of commentators, designers, builders, and users of these areas, these neighbourhoods may be characterized as anything from abject failures to glowing successes.

## **Research Questions of the Project**

The following research questions drive our project's examination of ecourban developments around the world.

## What are the cases for and against ecourban developments?

What different justifications are offered for ecourban developments depending on: people involved, place, leadership, institutions, place-specific history? What are the implications for the "success" or "failure" of the ecourban development?

## What are ecourban trends doing to and for the city?

What norms, values and understandings of neighbourhood and community are being advanced in particular new ecourban developments, and absorbed by residents? How do they differ from those in the existing city as a whole?

## What do we need to know about all ecourban developments?

How can we better measure and track the performance of ecourban developments in terms of the preceding points, at the global scale, via the compendium?

## The project's theoretical framework

The Ecourbanism Worldwide conceptual framework aims to promote a balanced approach to neighbourhood scale ecourbanism. The seven extreme principles in our typology are 'extreme' when any one is pursued alone but, when pursued in balance, constitute an integrative framing of ecourban neighbourhoods, including their built-form, transportation and other engineered systems, land uses, public spaces, local institutions, social make-up and governance.

While ecourban neighbourhood developments by definition express integrative goals, our typology of seven principles permits assessment of the extent to which outcomes are being achieved in terms of each specific principle. Our typology likewise allows us to identify limiting cases that challenge integrated sustainability goals - instances of neighbourhood development that pose a challenge to certain expressed principles of ecourbanism, while exhibiting other outcomes that fulfil the intent of one expressed principle in particular.

Integrative ecourban neighbourhood practice is most likely when each of the seven principles receives emphasis within the overall framework, and when work is not driven disproportionately by one principle in particular.

We have identified seven guiding principles of ecourban neighbourhood development as depicted in Table 1.

Extreme Type	Key Principle
Econ-urban	To shift economic growth in cities toward greener products and forms; pursuit of green capitalism.
Ecol-urban	Lighter footprint living with energy and materials efficiency built in to design and technology, as well as the ability to directly experience wild nature.
Living-urban	Complete community development with a view toward wellbeing, liveability, and resilience to shocks from outside the neighbourhood.
Local-urban	Offers a sense of self-determination and active participation in all aspects of local life within the circumscribed neighbourhood.
Democ-urban	Reformulates citizenship at the local scale, and offers deliberative, community-based decision-making, with a suggestion about how this will assist in changing values and behaviours.
Diverse-urban	Accentuates and generates value from the mixing of diverse social, economic, and cultural offerings of urban life.
Equi-urban	Prioritizes redressing inequalities and injustices via attention to targeted groups' needs.

TABLE 1: SEVEN GUIDING PRINCIPLES OF ECOURBAN NEIGHBOURHOOD DEVELOPMENT (HOLDEN, LI & MOLINA, 2015)

Although many of the neighbourhood projects we have identified in our research incorporate more than one principle, many of them push one of these types to an extreme without adequately addressing the rest. In the same sense as an ecological system, the ideal form of development strives to keep all these in balance, thereby seeking integrative sustainability goals.



FIGURE 3. ECOURBAN NEIGHBOURHOOD DEVELOPMENT WITHIN INTEGRATED CONCEPTUAL SPACE, AS CIRCUMSCRIBED BY SEVEN EXTREME TYPES (HOLDEN, LI & MOLINA, 2015)

A more detailed discussion of the seven extreme principles to ecourbanism can be found in Holden, M., Li, C., Molina, A. (2015) The Emergence and Spread of Ecourban Neighbourhoods Around the World. Sustainability. 7(9), 11418-11437; doi:10.3390/su70911418.

## Ecourbanism Compendium: Progress to date

The goal of the Ecourbanism online compendium is to provide a resource for reflecting on the governance, design, building, operation and integration of model sustainable neighbourhoods, defined based upon an expanding array of frameworks, around the world. The compendium is intended to be an international, community-of-practice owned and operated tool. This compendium aims to disseminate the practices and outcomes of worldwide sustainable neighbourhood developments openly and with a curated, critical lens.

Through our research we also seek to identify what the compendium can and ought to offer in terms of closing the gap between leading edge practices in ecourbanism and social and policy research critiques of ecourban outcomes, as well as the various public perceptions of what ecourban neighbourhoods offer to the city and its liveability.

## **Preliminary Results**

As of September 2015, our research has identified the following number of neighbourhood-scale, infill, mixed use (including residential) developments that have expressed sustainability, resilience, or holistic goals:

- 420 ecourban districts located; our database is estimated to be 80% complete but with no obvious termination point, given the rapid expansion of ecourban practice.
- ~ 10% of these projects are built; with ~90% at various stages of planning and construction.

# RegionProjectsUnited States74European Union195Asia and Middle East95Canada27Australia / New Zealand8South America15

TABLE 2: NUMBER OF ECOURBAN NEIGHBOURHOOD PROJECTS IN DIFFERENT REGIONS OF THE WORLD, AS OF 2015

## **Emerging Standards**

As part of this our research we have identified a growing number of neighbourhood-scale standards for ecourban development. As part of this acceleration of the practice of model sustainable neighbourhood development, new standards have emerged since about 2006 to establish a sense of legitimacy, verifiability, comparability, and hierarchy amongst and within these new experiments. As of now, Criterion Planners identifies 56 tools applicable at the neighbourhood or city scale across 22 countries in its database, Transformative Tools.

## Appendix A: Workshop Participant Biographies

#### JULIA AFFOLDERBACH

University of Hull, J.Affolderbach@hull.ac.uk

Julia is an environmental economic geographer with a background in the natural sciences and economic geography. Her main research and teaching interests concern the relationships between economic development and environmental and social interests in respect to contested land uses and spatial planning processes. In her research, Julia examines how actors seek to access, influence, and change existing decision-making structures on land use and rights in local and regional development. In the past, Julia has examined the role of environmental organizations in forest management in Canada and Australia. More recently at the University of Luxembourg, she conducted research on cross-border cooperation, economic development, and spatial planning within the European Union. Drawing on different themes and regions, Julia's work provides a critical analysis of conventional governance models towards a contextsensitive and actor-centred approach of decision-making that emphasizes contextualized and multi-scalar actor relationships outside of formalized decision-making structures. Julia is also the project & research coordinator of the GreenRegio project.

#### ELIOT ALLEN

Principal, Criterion Planners (Portland), eliot@crit.com

Eliot Allen is an urban and regional planner focusing on the nexus of community planning and sustainability. Since founding Criterion Planners in 1979, he has become a nationally-recognized leader in the use of information technology to help designers and citizens create places that are measurably more livable and environmentally responsible. Eliot was a charter member of the American Institute of Certified Planners, and is a former chair of the Portland Sustainability Commission.

Eliot Allen is a specialist in urban sustainability rating tools, having served on the original LEED-ND core committee, and since 2007 serving as a technical advisor to the Sustainable SITES Initiative, EcoDistricts, and USGBC; as well as supervising over two hundred LEED-ND certification reviews worldwide for the Green Building Certification Institute, and serving as LEEDuser.com's ND expert. Eliot is a co-recipient of EPA's Climate Protection Award for the Chula Vista California Climate Protection Plan; the Congress for the New Urbanism's Charter Award for the Smart Code; and the APA Sustainable Communities Division Award for the Imagine Austin Comprehensive Plan. He is a former chair of Portland's Energy Commission, and currently serves on the Urban Planning Task Group of the American Society for Testing & Materials, and the USGBC Board of Directors Nominating Work Group.

## DOMINICA BABICKI

PhD Candidate, Aix-Marseille University and University of Western Ontario, dbabicki@gmail.com

Dominica has been working in the sustainability, environment and planning fields locally, nationally and internationally for close to 25 years. Her background includes extensive work experience with the non-profit sector, government (federal and local), and academia. The role she has had with the many organizations she has been involved with reflects her desire to contribute to research and bridge ideas between continents, levels of government, and organizations on issues related to the environment and sustainable development. This includes her 15 years with the International Centre for Sustainable Cities (later Sustainable Cities International), her role as researcher and lecturer at the University of Manchester, and as energy manager for the District of North Vancouver. Over her career she has also had the opportunity to sit on numerous boards and committees including as a board member of Sustainable Cities International, founding board member of the Vancouver Chapter of the Urban Land Institute, board member of the Community Energy Association, and member of the International Committee of the Canadian Institute of Planners. Her current studies also reflect her passion for trans-disciplinary thinking and international collaboration (B.A. – UBC, Political Science/French Literature; M.A. – Carleton, Political Economy; M.R.M. – SFU, Resource and Environmental Management). This is further evidenced by her current academic endeavours, a PhD in geography on issues related to climate change, energy and eco-districts which is jointly supervised by scholars from Aix-Marseille University in France and the University of Western Ontario in Canada.

#### **ROBERT BOYER**

PhD, Assistant Professor, University of North Carolina (Charlotte), rboyer1@uncc.edu

Robert Boyer is an assistant professor in the Department of Geography and Earth Sciences at UNC Charlotte, and a faculty affiliate with both UNC Charlotte's program in Public Policy and the Infrastructure and Environmental Systems (INES) program. He earned his PhD in Regional Planning from the University of Illinois at Urbana-Champaign in 2013. His research focuses on experimentation in the built environment, specifically how grassroots environmental movements influence long-term plans for urban and regional development. He is interested in alternative residential development models like cohousing and ecovillages, and how these community spaces nurture innovation in construction, transportation, and other material practices. A seasoned performer of improvisational comedy, Boyer has just begun exploring the usefulness of theater as a metaphor for how plans work as signals in complex, multi-actor urban regions. He is a co-principal investigator with the NSF-funded Integrated Network for Social Sustainability (INSS) and teaches courses in urban planning and urban sustainability.

## **I-CHUN CATHERINE CHANG**

PhD Candidate, University of Minnesota, chang444@umn.edu

Catherine is a doctoral candidate in Geography. She earned her B.A. and M.S. also in Geography in Taiwan. Catherine's previous research focused on the political economy of urban infrastructure projects in East Asian cities, with particular interests in the role of authoritarian states in urban politics and policies. Since beginning her graduate study in Minnesota, she has been intrigued by the convergence and divergence of neoliberal urban projects across places, and the newly found "symbiosis" between urban ecology and urban economy in recent urban policies. Catherine currently works on how urban sustainability has become a strategy to achieve urban entrepreneurship, and how green urbanism regards environmentally-friendly technologies as the key for next-generation urban competitiveness. Using Sino-Singaporean Tianjin-Binhai eco-city and Sino-British Shanghai-Dongtan eco-city as case studies and tracing their transnational connections to Singapore and London, Catherine's doctoral dissertation research explores the interplays and connections between urban sustainability and different socio-economic contexts across geographical places and scales, with empirical contributions centered on understanding the social construction processes and societal implications of ecological urbanization experiments in contemporary China and beyond.

## JOSÉ FERNANDO CUELLO CUELLO

Deputy Director, Department of Environment, City of Bogotá, doscuellos@gmail.com

Mr. Jose Fernando Cuello Cuello is a Colombian architect, environmental management specialist and expert in land use planning and ecourbanism. He has worked for the City of Bogota's Department of Environment, 'Secretaría Distrital de Ambiente' for over 17 years, as a participant, coordinator and director of public projects in the realm of environment, including the city's environmental management plan, the city's environmental observatory (oab.ambientebogota.gov.co), the construction and operation of environmentally friendly classrooms in urban protected areas, the implementation of the main ecological structure in the city, environmental guidelines for land use planning, zoning and local area plans, in addition to environmental guidelines for large scale housing projects such as "Plaza de la Hoja". Mr. Cuello is also a researcher, university lecturer and public speaker in these and related topics. He contributes his knowledge and expertise in his blog, "Ecourbanismo" (http://urbanismosostenible.blogspot.com). Mr. Cuello has a Master's Degree in Urban Management and Business Management (MBA).

## MARTA FAAREVAG

FCIP RPP, Principal, PFS Studio, mfarevaag@pfs.bc.ca

Marta Farevaag works at the interface of urban planning with landscape architecture and urban design. Areas of expertise involve design guidelines, land use planning, heritage resource planning, commercial area revitalization, park and open space conceptual master plans, and public consultation processes. She regularly works on multi-disciplinary teams addressing land use and urban design assignments.

#### **REBECCA HOLT**

Perkins + Will, Rebecca.Holt@perkinswill.com

Rebecca is a Senior Sustainable Building Advisor and researcher with Perkins+Will's Research team. She has been consulting on a variety of work related to sustainability concepts and high performance building design for more than 12 years. She contributes to community energy plans, sustainability plans and policy, green building strategies, indicator and benchmarking programs, and sustainable land use plans. Rebecca was the lead researcher and primary author of the Survey of International Tall Wood Buildings.

## **RACHEL MOSCOVICH**

MES, LEED AP, Senior Planner, Integral Group

Rachel is an experienced strategist and project manager with nine years of experience in the sustainability field. At Integral, Rachel works on the Sustainability and Planning team, developing sustainability targets and action plans at the building, neighbourhood, and city scale. Her work experience ranges from policy development to greenhouse gas accounting to program design and implementation. With a background in urban planning, green building and sustainable business, Rachel brings a broad understanding of current sustainability issues and solutions in the public and private sectors.

#### MARTIN NIELSEN

Architect, AIBC, MRAIC, P.Eng., LEED® AP, DIALOG, Mnielsen@dialogdesign.ca

A registered architect and mechanical engineer, Martin brings over twenty-five years of experience and leadership to DIALOG's urban design, mixed-use development, higher education, and transportation projects. He is very passionate about developing sustainable design solutions that are socially, economically, and environmentally responsible. Prior to joining DIALOG's Vancouver studio, Martin was a principal with Busby Perkins + Will.

Martin's recent project work includes the redevelopment plan for the Pearson Dogwood Lands, design of a new UBC District Energy System, and the regenerative design of a mixed-use project in Memphis. Prior to joining DIALOG, Martin led the design and construction of UBC's Centre for Interactive Research on Sustainability (CIRS); targeting LEED® Platinum and Living Building certification, the facility is considered one of the greenest institutional projects in North America.

Martin is actively involved in research and teaching, has served as Chair for both the Vancouver Urban Design Panel and the UBC Advisory Design Panel, and is currently serving on the Squamish Nation Urban Design Panel. Martin's experience includes a host of mixed-use development projects such as One Wall Centre, the Flatiron Building in Vancouver's Coal Harbour and a sustainable mixed-use project at the University of British Columbia of Modern Green, the first development outside of Asia for one of China's largest green developers.

#### WILCO VAN BEMMEL

Dutch Urban Design Centre and Dunefield Consulting, wilco@dunefieldconsulting.com

Wilco van Bemmel has worked as Senior Land Use Economist and Director of Area Development at Dutch municipalities and public-private partnerships between 2004 and 2011. His projects involved revitalizing post-war neighbourhoods, industrial waterfront areas and 18-19th century heritage buildings. Since 2011, he works through his company Dunefield Consulting as a Development Manager of affordable housing projects for municipalities, housing providers and developers in Alberta and British Columbia. He also works as a Project Manager for the Dutch Urban Design Centre to help European innovators implement their sustainability technologies in North America. Wilco van Bemmel collaborates in the Dutch research project of the Foundation for Sustainable Area Development (FSA) to assess the community sustainability of 10 area developments worldwide, including Hamburg, Antwerp, Malmo, Amsterdam, London, Rio de Janeiro and Masdar City.

#### ANKE VAN HAL

Nyenrode Business Universiteit, a.vanhal@nyenrode.nl

Prof. Anke van Hal, Ph D, M Sc is professor Sustainable Building & Development at the Center for Sustainability at Nyenrode Business Universiteit (since January 2008) and professor Sustainable Housing Transformation at the Faculty of Architecture of the Delft University of Technology (since November 2007). Together with professor Danielle Zandee she is the academic leader of the Nyenrode Center for Sustainability. Anke van Hal is a member of the board of the Dutch Green Building Council.

#### LISA WESTERHOFF

PhD Candidate, Resource Management and Environmental Studies, UBC

Lisa Westerhoff is a PhD candidate at the Institute for Resources, Environment and Sustainability at the University of British Columbia in Vancouver. Lisa has worked on a number of climate change adaptation and governance projects, including EUR-Adapt, a four-year project on multi-level governance in climate change adaptation out of Umeå University in Sweden. Drawing on her experience as a Greenest City Scholar with the City of Vancouver, Lisa's current research shifts her focus towards the creation and unfolding of sustainable urban neighbourhoods, including Vancouver's own Olympic Village. Lisa draws on a number of social science and humanities-based approaches that conceptualize climate change and sustainability as both material and socially-constructed phenomena, and is particularly interested in the various sustainability narratives that have been adopted by different groups and at different scales, and their implications for citizen engagement and decision making. Lisa works under the supervision of Dr. John Robinson with support from Pacific Institute for Climate Solutions and the Social Sciences and Humanities Research Council of Canada, and holds a BA and an MA in Geography from the University of Guelph, Canada.

#### YOSHIKI YAMAGATA

National Institute for Environmental Studies (Japan), yamagata.yoshiki@gmail.com

Yoshiki Yamagata graduated from the University of Tokyo (PhD in System Science). Since 1991, he has been working at the National Institute for Environmental Studies (NIES) in Tsukuba, Japan. Currently, he is studying climate risk management as the Principal Researcher for the Center for Global Environmental Research (CGER). He is also affiliated with International Institute for Applied Systems Analysis (IIASA) in Vienna and Institute of Statistical Mathematics (ISM) in Tokyo. His recent research topics include: land-use scenarios, resilient urban planning and international regime networks. He has lectured at the University of Tokyo, University of Tsukuba and Hokkaido University. Internationally, he has served as Lead Author of the Intergovernmental Panel on Climate Change (IPCC), steering committee on the "Global Carbon Project" and the Editorial board of "Applied Energy", among other roles.

#### YIZHAO YANG

University of Oregon, yizhao@uoregon.edu

Dr. Yang is the Interim Program Director of the Master of Community & Regional Planning Program and an Associate Professor of the Department of Planning, Public Policy & Management at the University of Oregon.

## Appendix B: Workshop Organizer Biographies

#### DR. MEG HOLDEN

Associate Professor, Urban Studies and Geography, Simon Fraser University, mholden@sfu.ca

Dr. Meg Holden (PhD in Public and Urban Policy, New School for Social Research) is Associate Professor of Urban Studies and Geography at Simon Fraser University in Vancouver, Canada. Dr. Holden's research and teaching is situated within the domains of social science, policy studies, and philosophy, focusing on critical questions faced by cities, sustainability workers, policy makers, and theorists and agents of change generally. Dr. Holden also works within the realm of applied policy research and practice in the service of sustainable cities, in particular via the Regional Vancouver Urban Observatory (RVu, www.rvu.ca), which she founded in 2004.

#### CHARLING LI

P.Eng., LEED AP BD+C, Candidate, Master in Urban Studies, Simon Fraser University, charling\_li@sfu.ca

Charling Li is a Professional Engineer with seven years of experience in the design, construction and certification of green buildings in Canada. Her career has been shaped by her passion for making the urban built environment more sustainable. Her technical background gives her the ability to understand the physical science behind sustainable technologies, while her research work in the Urban Studies program equips her with an understanding of the social and policy barriers to sustainable urban development. Charling's Master's thesis examines the barriers to district energy implementation in BC's Lower Mainland through a governance lens.

She also holds a Bachelor of Applied Sciences, Honours Mechanical Engineering from the University of Waterloo, Canada, where she also completed six co-op terms in various mechanical and manufacturing engineering sectors.

#### ANA MOLINA

Candidate, Master's in Public Policy, Simon Fraser University, ajm15@sfu.ca

Ana Molina is a graduate student in the School of Public Policy, at Simon Fraser University. She works with Dr. Meg Holden as a research assistant to the Ecourbanism Worldwide project, with a particular interest in social sustainability, social justice and diversity, and interpretations of sustainable development in the Global South. As part of her graduate research work, she is interested in urban planning and policy issues surrounding housing affordability and family housing policy in the Vancouver regional context, as well as exploring opportunities to create 'complete communities' and policy options for creating urban areas that are inclusive and supportive of families with children. Ana's work experience includes four co-op terms as a policy analyst at Aboriginal Affairs and Northern Development Canada, working specifically on Fiscal Harmonization, work as a sustainable community development researcher internationally, and front-line work at Canada Revenue Agency. These experiences helped to orient, early on, her interest in social policy. She completed her undergraduate studies at Simon Fraser University, graduating with a Degree in Geography, Extended Minor in Economics and Minor in Business.

#### **RESEARCH TEAM MEMBERS**

Other research team members for the 2014-2015 academic year included Mike Wakely, Luc Bagneres and Stuart Dow of Simon Fraser University.

## Appendix C: Perspectives from Bogota, Colombia

We asked José Fernando Cuello Cuello, Deputy Director, Department of Environment, City of Bogotá a number of questions in order to get a sense of the ecourban development context in Latin America. Mr. Cuello provided the following thoughtful responses in Spanish which were translated by Ana Molina. This Q&A was distributed to the participants of the IAG Inaugural Workshop on June 1st in order to spark a dialogue on the international nature of ecourbanism.

## **Q:** In your opinion, what actions should be taken to adopt and institutionalize ecourban practices into mainstream urban development practices in Latin America, recognizing that numerous projects that originally intend on adopting ecourban principles drop these endeavors along the process?

**A:** The regulations that shape and guide urban development, as well as the instruments that form part of these, are different across Latin American countries. At the same time, interest on the part of urban development projects in environmental sustainability and their sustainability outcomes varies greatly, as do their achievements in this regard. Latin American countries have seen sustainable urban development initiatives that, while evolving from an array of factors, at different scales and development stages, are seeking to institutionalize environmental sustainability in urban development projects. Examples of such projects include: the projects undertaken by 'Infonavit'<sup>1</sup>, the Mexican federal agency in charge of workers' housing (The Instituto del Fondo Nacional de la Vivienda para los Trabajadores), which uses multiple sustainability indicators in their numerous projects, but which have been criticized for locating projects in the urban periphery and thus contributing to sprawl; the Sustainable Social Housing Initiative (SUSHI)<sup>2</sup> of Sao Paolo, Brazil, which sought to identify and define achievable environmental sustainability priorities for their social housing projects with the support of an international specialized partner organization; and several LEED certified projects across Latin America, although the benefits of such efforts are limited to the individual building scale, as opposed to the neighborhood, and as such are not accessible to all socio-economic segments of society.

<sup>&</sup>lt;sup>1</sup> 'Infonavit' is a Mexican national financial institution that manages worker's savings and finances social housing. More information about 'Infonavit' and their 'Green Mortgage' housing financing scheme can be found here: 1) EMBARQNetwork, 2) World Habitat Awards and 3) The New Economy

<sup>&</sup>lt;sup>2</sup> SUSHI (The Sustainable Social Housing Initiative) was developed by the United Nations Environment Programme (UNEP) to increase the use of sustainable (resource-efficient and energy-efficient) building and design solutions in social housing programs in developing countries. The project has 3 main components: mapping and local assessment; selection of solutions; and awareness-raising, training and dissemination. Additionally, the project will provide guidelines and case studies for developers to integrate sustainable solutions in the design, construction and operation of social housing units. A second phase of the initiative was implemented in India and Bangladesh in 2012. For more information, see: 1) UNEP and 2) Center for Sustainable Global Enterprise

There are also several pilot projects which are not seeking the institutionalization of ecourbanism and its associated practices, but nonetheless make an important contribution through their adoption of ecourban development criteria. Similarly, we can also find projects pursuing sustainability accreditation, but which have thus far demonstrated poor achievement in one or more of the three dimensions of sustainability (environmental, economic and social). In 2014 Bogota adopted a public policy of ecourbanism 'Política Pública de Ecourbanismo y Construcción Sostenible' (Decree 566) which is a binding policy for the public sector (and non-binding for the private sector). The policy aims to define and establish commitments on the design and built form of the city for the different public and private actors involved in urban development projects in Bogota, for the purpose of achieving greater sustainability in such projects. The policy has three pillars: sustainable practices; institutional capacity building, strengthening and management; and culture and education for citizens about sustainability. Among its outcomes, the policy seeks to issue and implement a code of construction and sustainable urban development which would be a mandatory requirement for all new construction and development projects in the city.

Since the adoption of the Ecourbanism policy, the private sector has cautioned that: a long-term vision is required (the policy, in effect until 2024, is considered a medium-term policy by the private sector); more effort is needed to get private and public actors working together; there is a need for an action plan focused on solving problems which can be solved; start from market-based solutions and pursue alternative options carefully; and stressed the need to send clear market signals through incentive mechanisms and legal certainty.

It is highly desirable that local solutions be found through context-specific analysis that incorporates local priorities<sup>3</sup> as well as sincere attention to commitments between different social actors, supported by institutions with specialized knowledge. The adoption of legal instruments which can turn commitments into legal obligations is also likely required.

Getting to this point (the policy) in Bogota has taken over a decade of discussions among private and public actors, and the strategic leadership of the City's Department of Environment (Secretaria Distrital de Ambiente), as well as numerous proposals by the agency to integrate environmental sustainability goals and criteria into the instruments used in local land-use planning. The role of the agency and its proposals have over time increased awareness and brought environmental sustainability to the fore among new public and private actors, and has ultimately enabled the development of the current circumstances.

<sup>&</sup>lt;sup>3</sup> In Bogota and Colombia more generally LEED has only been pursued in large commercial buildings, and in headquarter facilities of multinational corporations. It has not yet been pursued in the residential sector. Having said this, the main priorities of LEED, namely water and energy conservation, are not the most critically important in ecourbanism for a city like Bogota. Given the vast array of factors that differ from the North American context, from climate to socio-economic factors, local priorities must be incorporated for these to be adequately addressed. In the case of Bogota, climate change resilience (esp. stormwater management) is one of them.

## **Q:** In thinking about the city of Bogota, what relationship do you see exists in the city between sustainable urban development projects and urban planning?

A: The quest for greater environmental sustainability in urban projects in Bogota has been expressed, to an extent, in various urban development instruments and procedures adopted in 2000 as part of Bogota's Land Use Plan. However, the adoption of such instruments and procedures is not sufficient to achieve sustainable urban projects or 'ecobarrios', since these do not ensure the use of sustainability criteria in all three dimensions of sustainable development, nor do they establish the underlying conditions needed to use sustainability criteria effectively, such that projects and neighborhoods actually improve their environmental performance outcomes.

Although the District Planning Department of Bogota (Secretaría Distrital de Planeación) takes a leading role in the formulation of Bogota's Ecourbanism policy (Política Pública de Ecourbanismo y Construcción Sostenible, adopted by the incumbent administration, lasting 4 years) and an environmental sustainability component is strongly emphasized as part of Bogota's Social and Economic Development and Public Works Plan (Plan de Desarrollo Económico, Social y de Obras Públicas, also in effect for 4 years), urban planning was and has been weak in incorporating sustainability criteria in planning and in the design of a participatory management process where public actors from different governmental agencies are brought together to work in an integrated manner, combining their strengths.

The projects that have been implemented have lacked comprehensive and integrative approaches to environmental sustainability, in large part due to planning and implementation being carried out in isolation by both the private and public sectors. Only technical aspects are integrated through approvals processes and licensing, resulting in guidelines that do not take budgetary effects into consideration; and workshops with little capacity for institutional decision making and instruments that do not enable true exchange of knowledge, tools and potentials for synergy between institutions.

Public and private institutions have different interpretations of what constitutes environmental sustainability and also different political will regarding the sustainability of their projects. Private actors are particularly resistant to apply sustainability criteria in urban planning, taking instead a political position that resists internalizing the environmental costs resulting from their projects (environmental externalities), choosing instead to maintain the status quo in the real estate market so as to maintain economic certainty and reduce financial risks.

In my opinion, I reiterate, an 'ecobarrio' or ecourban neighborhood project should have goals in all three dimensions of sustainability (environmental, economic, and social) and be able to demonstrate superior performance in environmental indicators in comparison to conventional neighborhoods and projects.

This does not necessarily mean or require the use of the latest technology or large financial investments. However, it does mean that the greenwashing of projects that barely exceed the minimum requirements of sustainability (observed by conventional projects) is not sufficient, as such projects and neighborhoods demonstrate inadequate levels of sustainability, are not efficient in their resource use and lack integration to their social and environmental contexts.

#### **Q:** What, in your opinion, do 'ecobarrios' around the world have in common?

**A:** According to an assessment I performed during 2012<sup>4</sup>, ecourban neighborhoods are: planned (i.e. they have a master plan); they have performance indicators and monitoring and tracking measures and achieve better results than conventional/mainstream neighborhoods in the three dimensions of sustainable development (environmental, social, economic); they are planned, designed and realized in the medium and long term; they are usually government projects that have the support and participation of complex networks of public and private institutional partners; require the investment of a developer, but can be designed to maximize economic returns and even be good business; they are used as examples, as pilot projects and experimentation laboratories for professional actors as well as society more generally; they seek to go beyond required minimum legal standards; they are used as part of broader brand-building and marketing strategies of cities.

## **Q:** Reflections on the success of 'ecobarrios' in Latin America: Are they meeting expectations, delivering on their promises? What limiting factors exist for these types of projects?

**A:** In the evaluation I did in 2012 I found few 'ecobarrios' in Latin America. I did find many ecovillages, which in my opinion are different from 'ecobarrios', although in some parts of Latin America the term 'ecobarrios' is used interchangeably to refer to both ecovillages and ecourban neighborhood projects.

Projects such as those undertaken by Infonavit (Mexico) offer important contributions and lessons in terms of environmental sustainability and habitat as they have been designed with indicators in mind and seem to achieve improved environmental performance. However, they also seemingly experience the same sorts of problems as proposed social housing initiatives across Latin America: high cost of land result in monotonous extensions on the outskirts of cities (and beyond). Thus, projects such as those by Infonavit cannot be considered 'ecobarrios', especially in light of what several authors, including Rudin and Falk (1999), Rueda (2005), Hernandez Velazquez and Verdaguer (2009), and Moran (2011), have concluded are necessary elements of ecourban neighborhood projects, namely that an 'ecobarrio' should be dense, compact, have a good location within the city center and be well connected to the city.

<sup>&</sup>lt;sup>4</sup>This assessment, "La Verdad Sobre Los Ecobarrios" (The Truth About Ecourban Neighborhoods) can be found in my blog UrbanismoSostenible.

In the case of Bogota, the city through the District Community Action Agency (Departamento de Acción Comunal Distrital – DACD de Bogotá) embarked on a 2 year project, from 2001 to 2003, that made use of the term 'ecobarrios', although the project's purpose was more aligned with ecovillage concepts and goals which it sought to adapt to the urban context.

Unfortunately, in using the term 'ecobarrio' the DACD ignored the developments which already existed at the time regarding this concept and possibilities for actual ecovillages in urban settings, contributing to the confusion that currently exists around the term 'ecobarrio' in the city.

Some of the neighborhoods that participated in the DACD project continue to run DACD-started initiatives, which included urban agriculture projects, handicrafts made from recycled materials, recycling, paving of dirt parking lots with cobblestone, tree planting, vermiculture, construction of parks, and community restaurants, among others. While these projects have the potential to advance any of the three dimensions of sustainability (social, environmental and economic), they are far from constituting an 'ecobarrio', as they lack integrative goals for the development of an ecourban neighbourhood overall, as well as lacking the use of sustainability indicators that would allow for comparison across and against conventional neighborhoods.

According to Ome (2012), other neighborhood projects initiated by DACD were abandoned due to lack of financial support from the local government or changes to the original leaders of the projects.

In Bogota there is also a more recent history of grassroots efforts towards establishing eco-neighborhoods in irregular settlement areas as part of efforts towards legalization. Since possibly 2009 the city has seen residents of informal settlements join forces and their own resources, with no government support or financial assistance, towards a common goal of creating an eco-neighborhood. These communities, such as Manantial, Corinto, Triángulo Bajo and Triángulo Alto, organize around such goals as a strategy to avoid government-ordered displacement and relocation of irregular settlement dwellers, resulting from their location on hazard-prone areas or environmentally protected and undevelopable zones (such as the Reserva Forestal Protectora Bosque Oriental de Bogota, a protected forest in the eastern part of the city). These neighborhoods have implemented efforts in the areas of alternative energy, recycling, urban gardens and landscape management, however, their long-term status has not yet been defined.

On the other hand, the social housing corporation of the city of Bogota, Metrovivienda, recently launched a social housing project in Bogota's downtown core that could be considered a pilot ecourban neighborhood development project in the city. While currently under construction, when finished it will be home to 457 social housing units.

The project, 'Plaza de la Hoja'<sup>5</sup> integrates ecourban neighborhood sustainability guidelines as well as guidelines for sustainable construction set forth by the city's Department of Environment (Secretaria Distrital de Ambiente), which guided the architecture design competition from which the winning design for 'Plaza de la Hoja' was chosen. It is yet to be determined whether once finished the project meets its sustainability promises.

In conclusion, there is insufficient consolidated experiences of true 'ecobarrios' in Latin America to reach a sound verdict on whether they are or not meeting expectations. What is clear is that the lack of government involvement, at all three levels (local, regional and national), in the planning and execution of such projects, as developer and/or key partner in the development process, is a limiting factor of great significance. Other limiting factors include: availability of resources to invest in an ecourban neighborhood; willingness of public and private actors to assume the risks associated with new experiences in urbanism and urban design; the current legal framework, especially as related to public services; the availability of professionals (and the resources to fund these) to guide and manage ecourban neighborhood projects on the part of both government and private sector developers; and lastly, municipal government interest in the role that ecourban developments can play in branding the city, or to serve as pilot projects for professionals and society in general.

# **Q:** In your position as an urban development and sustainability practitioner, could you offer some challenging remarks regarding what you think Bogota might need from a tool/information resource related to ecourban development frameworks and projects around the world?

A: Bogota's policy of Ecourbanism sets forth targets and indicators that are currently under review and will be adopted across several municipal government agencies. Bogotá also has an environmental observatory 'Observatorio Ambiental de Bogota'<sup>6</sup> dedicated to tracking local environmental indicators and disseminating environmental information. The observatory may be an adequate channel through which to publish the progress attained through the Ecourbanism policy in the future.

The problem is perhaps not the design of an information dissemination tool, but rather the strategy that will make ecourbanism a reality in the city, and how this information tool can respond to this strategy. The policy has three pillars, each of which has a line of action with its own set of proposed projects. Seen in this way, all components of the policy are seen to have the same relative priority, all can be initiated at the same time, and all seem necessary.

<sup>&</sup>lt;sup>5</sup> According to the developer partner building the project, ARPRO, the project is expected to be completed during 2015. Future residents have already been determined through a draw. See: 1) ARPRO, and 2) El Tiempo.

Beyond pilot projects (which are observed and included in the policy), there is some level of certainty that the projects the city chooses to embark on will offer opportunities to translate sustainability criteria into the city. Such projects include infrastructure corridors, urban development plans as well as urban renewal plans, ecourban neighborhood projects, and more. Each project represents an opportunity to further ecourbanism, and thus an opportunity which should not be missed. In this context, I can think of three challenging observations:

- An 'ecobarrio' (eco-neighborhood) first must be a good neighborhood in the same way that a sustainable urban project must first be a good urban project. Sustainability indicators should not mask poor urban performance (as is the case with Infonavit's low density neighborhood projects).
- The transformation of the city towards greater sustainability is a slow process that advances with each new sustainable urban project. Citizens need to know about and be prepared for this, otherwise frustration could threaten public support for the implementation of a policy. Additionally, the strategy behind each environmental impact indicator and management guideline ought to be analyzed carefully and disseminated widely, in the same way in which the objectives of the policy and its guidelines are disseminated.
- Government agencies working in silos, as well as a public sector that distrusts the private sector and vice versa, does not lead to viable proposals for sustainable urban projects. Sustainability criteria and indicators which focus exclusively on public or private actors exacerbate this situation. We could imagine that sustainability criteria and indicators that account for shared responsibility of multiple actors and integrate collaboration into their frameworks could lead to improved synergies across institutions and actors enhancing opportunities for ecourban development.

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