

Given the obvious benefits to democratic governance and sustainable development, it is strongly recommended that governments require the establishment of Citizens' Advisory Councils that are operated solely by and for the citizens of the region. Such councils will provide an unprecedented level of transparency and will enable the realization of citizens' procedural rights to access information and participate in decision-making regarding industrial activities.

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THE URBIS PARTNERSHIP: AN APPROACH TO ACHIEVE SOCIAL AND ENVIRONMENTAL RESILIENCE IN URBAN REGIONS

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The URBIS Partnership, a proposed global network of scientists, planners, governments, educators, and policy-makers who discuss and share ideas and approaches to metropolitan, provincial, and national frameworks for urban sustainable planning, is a platform for creating more resilient and equitable urban regions. Local governments participating in this network would share sustainable management experiences and document the process of linking science, education, and policy while using an ecosystem approach to urban planning.

Experiences of local urban communities can help drive international environmental policy for sustainability.

This approach applies the experiences of local urban communities as drivers of international environmental cooperation and policy and relates directly to rights-based approaches to conservation. Local communities are acknowledged as rights-holders and best practices and solutions developed at the local level are shared internationally as useful tools for other communities to draw upon. This partnership also includes a proposed designation process to recognize urban areas' efforts to engage in participatory and comprehensive social and ecological approaches in urban planning for sustainability. Throughout this process, sustainable

management practices will be developed and then catalogued for sharing and dissemination as part of a global knowledge network. The URBIS Partnership takes a unique approach to these efforts by enabling stakeholders to actively participate and subsequently be recognized for planning and managing for urban resilience.

RIGHTS-BASED APPROACHES TO CONSERVATION AND URBIS

Theorists and practitioners of conservation have become increasingly interested in rights-based approaches to sustainable development. Simply put, rights-based approaches posit that governments, donors, and societies have a responsibility to promote and maintain a minimum standard of well-being and rights for all. For environmental sustainability and conservation, these rights include (but are not limited to) the right to a clean environment, the right to participate, the right to access to water, and the right to health.² Increasingly, environmental sustainability has been strongly associated with

¹ The authors would like to thank Cynthia Kim for dedicated research assistance.

² Campese, J., T. Sunderland, T. Greiber, and G. Oviedo (eds.), 2009. *Rights-based approaches: Exploring issues and opportunities for conservation*. CIFOR and IUCN: Bogor, Indonesia.

Environmental sustainability is linked to good governance and the full realization of fundamental rights.

‘good governance’ and with a growing recognition that this involves integrating rights, norms, and standards in policy and implementation to ensure the full realization of the aforementioned rights as they relate to environmental sustainability.

The URBIS Partnership offers an avenue for integrating these rights into policy planning by advocating a community-centered approach in urban planning. While not a legal framework *per se*, the proposed five-tier approach of the URBIS Partnership³ is similar to the IUCN step-wise approach to implementing rights-based conservation⁴. The URBIS approach would provide a platform for documenting these five steps at the local level and sharing them with other communities worldwide.

TOWARDS AN ECOSYSTEM APPROACH FOR URBAN REGIONS

Globally, the unsustainable and inequitable use of resources and demographic changes result in extensive pressures on existing environmental and social resources. The consequences of such pressures are arguably felt acutely in urban regions, often due to factors such as high population density and altered ecosystems. This is all the more important as, for the first time in history, more than half of the world’s population lives in cities.⁵ Effects of urbanization include the alteration of resource flows, increase in regional temperatures, and degradation of air and water quality⁶. In the case of biodiversity, urbanization processes such as land use and changes in land cover greatly affect ecosystem structure and function and eliminate natural habitat for many species. Hence, current urban growth and development patterns are considered important drivers of biodiversity loss and the consequent homogenization of species composition within cities⁷. Decreases in biodiversity may be linked to decreases in response diversity within communities (including human communities), which may erode resilience and the ability to adapt in the face of rapid and unexpected change⁸. Urban areas are also vulnerable to climate change, particularly to effects such as rising sea-levels and temperatures. The fact that 11 of the world’s 15 largest cities lie on coastal areas or estuaries⁹ highlights the importance of conservation and restoration plans to ensure the provision of key ecosystem services such as flood mitigation by wetlands¹⁰, as well as engaging the most vulnerable communities. In this sense, urban regions can be incubators of novel conservation and restoration strategies and solutions that can ultimately increase resilience. For example, in New Orleans, citizen-led community greening efforts have fostered local leadership and community action, contributing to biological diversity and social and ecosystem recovery in the aftermath of Hurricane Katrina.¹¹ Such initiatives have provided an opportunity for formerly marginalized and vulnerable individuals to rebuild and redevelop their communities through practices that reduce the negative impacts on human health and the environment¹² while fostering conservation and restoration efforts and promoting human rights.

Unsustainable and inequitable patterns of use and demographic changes place extensive pressure on existing resources.

Integrated urban planning initiatives that focus on improving urban ecosystem health, addressing connections between

3 The URBIS Partnership’s proposal and draft strategy will evolve through collaboration with the Global Partnership of Cities and Biodiversity and will be further discussed at the City Biodiversity Summit at Nagoya, Japan; the 10th Conference of the Parties to the Convention on Biological Diversity.

4 The five steps of the IUCN step-wise approach are the following: 1. Undertake a Situation Analysis; 2. Provide Information; 3. Ensure Participation; 4. Take Reasoned Decisions; and 5. Monitor and Evaluate Application. See Greiber, T. (ed.), 2009. *Conservation with Justice: A Rights-based Approach*. IUCN: Gland, Switzerland.

5 United Nations Population Fund, 2009. “State of the World Population 2009”. Last accessed April 30, 2009, at: <http://www.unfpa.org/swp/2009/en/ch6.shtml>.

6 Tratalos, J., R. A. Fuller, P. H. Warren, R. G. Davies, and K. J. Gaston, 2007. “Urban form, biodiversity potential and ecosystem services”. *Landscape and Urban Planning*, 83: 308-317.

7 Grimm, N. B., S. H. Faeth, N. E. Golubiewski, C. L. Redman, J. Wu, X. Bai, and J. M. Briggs, 2008. “Global Change and the Ecology of Cities”. *Science*, 319: 756-760; McKinney, M. L., 2006. “Urbanization as a major cause of biotic homogenization”. *Biological Conservation*, 127: 247-260.

8 Elmqvist, T., C. Folke, M. Nyström, G. Peterson, J. Bengtsson, B. Walker, and J. Norberg, 2003. “Response diversity, ecosystem change and resilience”. *Frontiers of Ecology and the Environment*, 1(9): 484-494.

9 Gornitz, V., 2000. “Coastal populations, topography, and sea level rise”. Science Briefs-Goddard Institute for Space Studies, NY. Last accessed July 20, 2010, at: http://www.giss.nasa.gov/research/briefs/gornitz_04/.

10 Törnqvist, T., and D. Meffert, 2008. “Sustaining coastal urban ecosystems”. *Nature Geoscience*, 1: 805-807.

11 Tidball, K. G., and M. E. Krasny, 2007. “From risk to resilience: What role for community greening and civic ecology in cities?”, pages 149-164 in Wals, A. (ed), 2007. *Social Learning Towards a more Sustainable World*. Wageningen Academic Press: Wageningen, the Netherlands.

12 Allen III, C. E., 2008. “Sustain the 9! Greening of the Holy Cross/Lower 9th community”. *Climate change and cultural heritage*, 25(2): 83-85.

rural and urban systems, and providing ecological and social services will not only help create sustainable conditions in these diverse, complex, and changing areas, but will also empower vulnerable communities through promoting their right to a better environment and quality of life. Fostering systems education¹³, communication, and ongoing discussions among scientists, urban planners, policy-makers, and educators can help urban regions implement strategies that build social and environmental resilience¹⁴. This can be achieved through the implementation of a human rights approach whereby solutions come from the people themselves and their own strengths and aspirations, and through good governance, access to public policy, and economic and education opportunities¹⁵.

THE URBIS PARTNERSHIP DESIGNATION

The United Nations Educational, Scientific and Cultural Organization (UNESCO) New York Office has coordinated and linked several urban initiatives to complement the work begun by the UNESCO Man and the Biosphere Programme (MAB) and other United Nations agencies to promote the value of urban areas' biological diversity and ecosystem services. Institutional partners include Columbia University (2000-2005), Stockholm University (2005-present), and Cornell University (2009-present). Metropolitan areas involved in this discussion include Montreal, Stockholm, Shanghai, New Orleans, Chicago, New York, and Istanbul, among others. Each of these metropolitan areas has shown interest in or has already applied an ecosystem and participatory approach to their planning efforts; all have expressed interest in their efforts being recognized at a global scale. For instance, Montreal has implemented a participatory conservation approach whereby biodiversity areas have been established all around the city to preserve the natural environment, the public's interests and well-being, and the city's economic development¹⁶. In Cape Town, a cross-disciplinary group of specialists from national, municipal, and civil society institutions was organized with the assistance of UNESCO and Columbia University to explore tools for environmental management, social inclusion, and poverty alleviation. Cape Town faces many challenges in terms of urban development and environmental conservation due to the rapid urban sprawl of impoverished communities and development pressures that have led to a decrease in biodiversity¹⁷. This situation indicates a need to provide integral approaches and solutions that take into account both environmental perspectives and socio-economic impacts of policies that can affect the lives of entire communities. Urban planning strategies should also encompass social and human rights issues and ultimately contribute to the alleviation of poverty and empowerment of marginalized communities by establishing a context in which these rights are not only acknowledged, but also actively promoted.

Urban regions can be incubators of novel conservation and restoration strategies to increase resilience.

Over the past 10 years, this work has resulted in several key findings that arguably indicate the need for a comprehensive regional ecosystem approach that integrates social learning, including education and outreach, in all steps of participatory planning and features incentives and recognition of sustainable urban efforts. This comprehensive regional ecosystem approach would help inform and complement a rights-based approach to conservation by, *inter alia*, identifying actions, stakeholders, and roles, ensuring public participation in environmental sustainability programmes, and ultimately helping implement conservation programmes¹⁸.

The authors propose coordinating a multidisciplinary, cooperative, and comprehensive group of scientists, planners, governments, educators, and policy-makers into a network, which is referred to here as the URBIS Partnership. This network would engage in comprehensive approaches to urban planning for sustainability through an international designation process (detailed below). The demand for this designation stems from increasing concern and lack of understanding about urban ecological and social processes within our global systems¹⁹. Scales at which these problems need to be addressed

13 Krasny, M. E., and K. G. Tidball, 2009. "Applying a resilience systems framework to urban environmental education". *Environmental Education Research*, 15: 465-482; Krasny, M. E., K. G. Tidball, and N. Sriskandarajah, 2009. "Education and resilience: social and situated learning among university and secondary students". *Ecology and Society*, 14(2): 38-56.

14 Krasny, M. E., C. Lundholm, and R. Plummer (eds.), 2010 (in press). "Resilience in Social-Ecological Systems: the Role of Learning and Education". Accepted as Special Issue of *Environmental Education Research*.

15 United Nations Trust Fund for Human Security, 2007. *Human security*. Last accessed August 1, 2010, at: <http://ochaonline.un.org/Home/tabid/2097/Default.aspx>.

16 Maxims News Network, 2009. "Montreal Canada: 2010 International year of biodiversity launched". *News network for the United Nations*. Last accessed July 20, 2010, at: <http://www.maximsnews.com/news20091021UNCBLogoannouncement10910210104.htm>.

17 Stanvliet, R., J. Jackson, G. Davis, C. de Swardt, J. Mokhoele, Q. Thom, and B. D. Lane, 2004. "The UNESCO biosphere reserve concept as a tool for urban sustainability: The CUBES Cape Town Case Study". *Annals of the New York Academy of Sciences*, 1023: 80-104.

18 Greiber, 2009.

19 Alfsen-Norodom, C., B. D. Lane, and M. Corry (eds.), 2004. "Urban biosphere and society: partnership of cities". *Annals of the New York*



Figure 1. Proposed URBIS Designation approach.

conflict between humans and nature are unproductive to conservation management. Instead, there is arguably a need for an integrated ecological approach to urban management²² that not only sees humans as rights-holders, but also as part of nature.²³ Understanding nature within urban areas as embedded in the larger landscape allows for integration and management at a variety of scales²⁴. Therefore, conservation of biodiversity must be planned and managed to coordinate protected areas along with the entire landscapes in which they occur, including urban and peri-urban environments²⁵. Applying this ecosystem approach to urban areas means the inclusion of flows, processes, and driving forces that create healthy, livable, and resource-efficient cities²⁶. Accounting for the biophysical aspects of the environment in urban planning can lead to the development and application of participatory approaches and new and flexible tools in policy-making such as the URBIS Partnership. Additionally, because such ecosystem-based policies are implemented through deliberative processes that include all relevant stakeholders, they have a greater chance of being successful and of providing synergistic solutions to current challenges²⁷.

In the midst of these complex conditions, the authors propose that urban metropolitan regions should follow a voluntary, participatory, and local planning approach. The URBIS Partnership would provide assessment tools, peer review, case studies, shared experiences, and continued guidance throughout the designation process. Any urban region that is starting, is in the middle of, or has recently abandoned a planning process can engage in this approach. This designation would also be useful for urban regions that would like guidance to refurbish, assess, and gain recognition for an established plan. A draft tiered process, which would be monitored by an URBIS secretariat, is presented in Figure 1.

There is a need for a regional ecosystem approach that integrates social learning and participatory planning for urban sustainability.

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20 Fox, Gregory H., 1992. "The Right to Political Participation in International Law". *Yale Journal of International Law*, 17: 539-595.

21 Catton, W., Jr., and R. Dunlap, 1980. "The new ecological paradigm for post-exuberant sociology". *The American Behavioral Scientist*, 24(1);

Plumwood, V., 2002. *Environmental Culture: the ecological crisis of reason*. Routledge: New York, NY.

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27 Marcotullio, P. J., 2008. *Exploring the Ecosystem Approach to Urban environmental management*. UNU-IAS Working Paper No. 159.

CONCLUSION

By addressing some of most pressing urban governance challenges, the URBIS Partnership offers an avenue for integrating a rights-based approach to environmental sustainability issues at the local level in urban regions. Since the majority of the world's population lives in metropolitan regions, it is there that policies must be reconsidered and restructured to equitably and strongly link conservation, restoration, communication, education, design, and participatory regional planning. The proposal presented in this article strives towards working with regions to achieve this goal and resolving the human-nature dualism previously described. The members of the global community of urban metropolitan regions themselves who are currently struggling with these issues are in the best position to inform and lead the process towards an international designation of urban resilience.

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