November 1, 2011

Submission to the Secretariat for the United Nations Conference on Sustainable Development for the Zero Draft of the Rio+20 Outcome Document from the Rio+20 Earth Summit Sustainable Cities Working Group

The Rio+20 Earth Summit **Sustainable Cities Working Group** (the "Working Group") is pleased to provide this input "for inclusion in a compilation document to serve as basis for the preparation of zero draft of the outcome document" from the United Nations Conference on Sustainable Development ("Rio+20"). The Working Group consists of a diverse group of leading civil society organizations and experts. Working Group members are listed in the Table of Contents.

The Working Group believes that it is essential for Rio+20 to give high priority to the challenges and opportunities presented by urban development worldwide. **Cities are critical to the planet's transition to a green economy that will increase opportunities, reduce poverty, and foster a more sustainable future.** Since the first Earth Summit in Rio in 1992, urban populations have increased by more than one billion and now for the first time in history more people live in cities than in rural areas. By 2050, the world's population is projected to increase from 7 billion to over 9 billion, with roughly 70 percent of people residing in urban areas.

Growth and migration patterns represent a set of critical opportunities and challenges for sustainable development. On one hand, cities are the centers of social and economic activity and attract people seeking to attain a better life. Indeed, the world's top 50 metropolitan regions are economic powerhouses, accounting for just 12 percent of the planet's population, yet generating roughly 46 percent of global GDP. However, cities also consume more than 75 percent of the world's natural resources, use approximately 75 percent of the world's energy, and are responsible for 75 percent of its carbon emissions. As cities experience rapid growth, they struggle mightily to provide adequate infrastructure—housing, water, sanitation, and transportation—for their citizens. Many are largely avoiding these responsibilities. Since the first Earth Summit, the number of slum dwellers worldwide has grown from roughly 660 million to nearly one billion. If cities shrink from their obligations, it will put all of us at risk. The way we collectively address urbanization will define the fate of billions of people and the sustainability of human society.

The need for local action was recognized at the 1992 Earth Summit with the acknowledgement in Agenda 21 that many global challenges "have their roots in local activities." A number of mayors and local authorities have shown real leadership, including through the adoption of local Agenda 21s and other sustainability plans. However, most cities still have not fully embraced their vital role in "educating, mobilizing, and responding to the public to promote sustainable development" (Agenda 21, Chapter 28). Rio+20 offers an opportunity to harness widespread interest in sustainable and inclusive urbanization to produce specific commitments and scalable action.

This document contains recommendations and findings from members of the Working Group in six subject areas. These recommendations reflect the views of their identified authors and are not necessarily the position of their affiliated organization or of the Working Group. The authors identify three types of outputs from the Rio+20 Earth Summit:
1. **Sustainable Development Goals** - negotiated global objectives or targets similar to the Millennium Development Goals.
2. **Institutional Arrangements** - new international bodies, structures, or networks to facilitate and enhance efforts by governments and other stakeholders on urban sustainability.
3. **Commitments** -specific actions to be undertaken individually or collectively by governments and other stakeholders.

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I. Green Jobs in a Green Economy

Michael Renner, Worldwatch Institute

Recommendations

1. Sustainable Development Goals
- To assure that the creation of green and decent jobs is a central objective of a green economy
- To tailor green jobs development to the varying needs of industrialized, emerging, and developing economies

2. Institutional Arrangements
- Create a *UN Green Jobs Coordinating Group*, assisted by a stakeholder and expert Advisory Council
- Establish a *UN Green Jobs Best Practices Unit*

3. Commitments
- National governments promise to advance green skill-building, social protections, and job standards.

Need for Action
A green economy must address the intersection of environmental sustainability, economic development, and social equity. A change in trade, tax, and subsidy policies is needed to make greater use of an abundant yet underemployed resource—people—and reduce reliance on limited and polluting resources, such as fossil fuels. The best way to ensure that a green economy works for the great majority of people on this planet is to pursue the creation of good quality green jobs.

Green jobs contribute substantially to preserving or restoring environmental quality. This includes measures to reduce energy, materials, and water consumption; protect biodiversity and restore ecosystems like wetlands and forests; and minimize or avoid the generation of waste and pollution. Some green jobs will be new, such as those in the expanding field of renewable energy. But the bulk of green employment will be in existing jobs—which requires that skill sets, work methods, and occupational profiles are brought into accord with sustainability principles.

Technological, infrastructural, and behavioral choices offer varying degrees of environmental benefit and associated green employment impacts. Climate mitigation has different implications than adaptation, as does the pursuit of new building standards vis-à-vis retrofits, public transport versus fuel-efficient automobiles, or materials recycling or reuse compared with landfilling. These choices for the transition to a green economy suggest that there are varying **"shades of green"** in employment: some are more far-reaching and transformational than others.

- Energy: Carbon capture may render the fossil fuel industry somewhat less damaging. But renewable energy offers a greener choice, and can help overcome energy poverty. The current number of renewable energy jobs worldwide surpasses 4 million, double the number in 2008.
- Transportation: Greater fuel efficiency, smart traffic management, alternative fuels, and propulsion systems can reduce the motor vehicle industry's footprint and green its workforce.

- But public transport (railways employ 7 million people and urban mass transit systems 7.6 million) is a more affordable option for many people, and permits greener and more equitable mobility. Millions more jobs are associated with the manufacture of 110 million bicycles and 22 million electric bicycles each year and their ongoing maintenance.
- Buildings: Performance standards and retrofitting have the potential for greening many of the world's 110 million construction jobs. Paired with measures to make housing more decent and affordable, they would improve the lives of the world's 1 billion slum inhabitants.
- Waste: Recycling and reuse offer more jobs than landfilling and waste incineration do, and are preferable from an environmental and health perspective. In industrialized countries, poor communities suffer from low-quality waste handling, and workers are exposed to dangerous and low-paying work. In developing countries, millions of informal waste-pickers confront hazardous conditions, but play a much bigger role in collecting recyclables than formal waste management. Organizing and formalizing informal recyclers would lift their incomes, reduce poverty, and ameliorate hazardous work conditions.

More Details on Recommended Outcomes
Institutional Arrangements
Policy cohesion should be accomplished via a **UN Green Jobs Coordinating Group**. This collaboration effort would integrate the work of relevant agencies such as UNEP, ILO, UNDP, UNIDO, UN Habitat, etc. An advisory council, drawn from businesses, labor, community groups, and relevant experts, could assist in analyzing key developments, opportunities, and challenges.

Facilitating the spread of green technologies and methods, and providing broad access to them, will be critical to the transition to a green economy. Successful policy innovations and green roadmaps will need to be shared as widely as possible. Some examples are renewable energy feed-in tariffs, micro-credit for solar home systems, green-building standards, and Bus Rapid Transit systems. The Rio+20 Earth Summit 2012 can create a repository for lessons learned by establishing a **UN Green Jobs Best Practices Unit**.

Commitments
Governments should improve knowledge of green jobs trends and developments, and integrate relevant data into national economic statistics, by:
- Crafting detailed definitions and sector-by-sector criteria for what constitutes green jobs (as the U.S. Bureau of Labor Statistics is currently doing);
- Generating regular annual reporting and data (via surveys, or via input-output modeling as the German environment ministry has done in the renewable energy sector for several years)

Governments should address potential skills shortages that could hamper the emergence of the green economy, by:
- Undertaking a national skills mapping exercise with the following aims: create skill profiles in each industry; identify strengths and gaps in existing skills patterns; create a plan for building the needed skill base (as the regional government of Navarra, Spain, has done);
- Setting up green training centers and programs, and encourage private sector companies and educational institutions to incorporate green jobs skills into their courses and apprenticeship and other workplace training, as appropriate. Ensure gender-balance and access by disadvantaged communities.

Social protections
- Governments should assure that Green jobs are "decent" jobs through effective social dialogue, collective bargaining arrangements, and partnerships for "high-road" strategies.

- Establishing and enforcing decent wage standards, occupational health and safety standards, and prohibitions against employers with a documented history of violating such standards from receiving public funds.
- Passing social-inclusion legislation (as Brazil has done with regard to informal waste pickers: offering legal recognition, requiring that municipalities work with recycling cooperatives, setting up pathways to formalization and poverty reduction)
- Creating and funding "fair transition" programs for workers in "brown" industries who are affected by the transition to a green economy, including retraining and relocation provisions.

Author and Contributors
Michael Renner is a Senior Researcher at the Worldwatch Institute, a research organization focused on global sustainability. This text has benefited from review comments by Philip Bump, Cheryl P. Derricotte, and Julie Roberts of Green for All, Michael Replogle of the Institute for Transportation and Development Policy, and Kathleen Mulligan-Hansel of the Partnership for Working Families, and feedback from Don Chen of the Ford Foundation.

II. Strengthening Local Institutions and Empowering People for Sustainable Development Governance

Joseph Foti and Jacob Werksman, World Resources Institute

Recommendations
1. *Sustainable Development Goal*
- Every nation will pass a freedom of information act, will put in place environmental impact assessment and other decision-making procedures with participation, and will have multiple means for citizens to enforce environmental laws by 2020.

2. *Institutional Arrangements*
- There should be improved coordination and enhancement of existing networks promoting transparency, accountability, and inclusiveness at the local level through a new multi-sector partnership.
- There should be the expansion of **international legal mechanisms,** including but not limited to the Aarhus Convention, to improve accountability at all levels of government.

3. *Commitments*
- Governments of all levels should advance concrete, measureable commitments to improve transparency, accountability, and inclusiveness in decision-making, based on the principle of common but differentiated responsibilities.
- All major local authorities worldwide should declare their intent to pass and implement laws, share best practices, and subject themselves to independent monitoring for open governance by 2015. Mayors and local executives will commit to take specific action to implement Principle 10.
- National governments will commit to decentralize to democratic local institutions and to accelerate the adoption of the above reforms.

Need for Action
The indispensable role of good local-level governance is made clear in existing sustainable development declarations. Principle 10 of the 1992 Rio Declaration states that, "Environmental issues are best handled with the participation of all concerned citizens, at the relevant level." Similarly, Agenda 21, Chapter 28, says that local authorities "construct, operate and maintain

economic, social and environmental infrastructure, oversee planning processes, establish local environmental policies and regulations, and assist in implementing national and sub-national environmental policies. As the level of governance closest to the people, they play a vital role in educating, mobilizing and responding to the public to promote sustainable development."

We have worked with non-governmental organizations who are members and affiliates of The Access Initiative, to gather more than 20 case studies on urban governance from 10 countries (Argentina, Bolivia, Cameroon, Chile, Costa Rica, Ecuador, Hungary, Mexico, Thailand, and the United States). These case studies demonstrated a number of barriers to transparency, accountability, and inclusiveness at the local level. Problems included:
- The public was unable to identify the agency responsible for the issue at hand.
- Services promised were not delivered and the public could not trace how allocated funds had been spent.
- Decisions were made in secret or the public was brought into a decision-making process well after all decisions had already been made.
- Decisions were made at the national level and local authorities and local residents had little say in their design and implementation.
- The public lacked the data to participate in complicated decisions such as river basin management.

Our contributors also pointed out a number of innovative approaches to bring local communities into the decision-making process such as participatory budgeting, social audits, and citizen suits. These approaches are already in place in many local jurisdictions. These case studies provide a solid basis for the our recommended Rio+20 outcomes

More Details on Recommended Outcomes
We call on governments of all levels to come to Rio with concrete, measureable commitments to improve transparency, accountability, and inclusiveness in decision-making, based on the principle of common but differentiated responsibilities. By 2015, all major local authorities worldwide should pass laws, share best practices, and subject themselves to independent monitoring for the following:
- Making available and usable information on all agency jurisdictions, information on budgeting and revenue, and contracting;
- Accepting and promoting use mechanisms for public accountability in service delivery such as public social audits and report cards of agency performance;
- Passing open meeting laws for all local authorities;
- Adopting reforms for early, meaningful public participation in policy and planning by a broad range of stakeholders;
- Adoption of local Access to Information laws;
- Providing proactive information on land use, development planning, waste disposal, utilities, and regular environmental quality monitoring data;
- Building the capacity of stakeholders to participate by integrating the rights and means to access information and participation into educational curriculums.

Mayors and **local executives** should commit to begin these reforms by the time of the Rio+20 Earth Summit

Authors and Contributors
These recommendations were developed by Joseph Foti and Jacob Werksman of the Institutions and Governance Program at the World Resources Institute. WRI serves as the Secretariat for the Access Initiative, the largest global network dedicated to ensuring that citizens have the right and ability to

influence decisions about the natural resources that sustain their communities. Access Initiative members from around the world carry out evidence-based advocacy to encourage collaboration and innovation advancing transparency, accountability, and inclusiveness in decision-making at all levels. In preparation for Rio+20, national coalitions from the Access Initiative have called on our respective national governments to make public commitments to advance Principle 10, through the "Three Demands" campaign. For our research on urban governance, we received case studies and other input from: The Bolivian Society for the Defense of Nature (PRODENA), The Center for Human Rights and Environment (CEDHA), CoopeSolidar (Costa Rica), The Ecuadoran Center for Environmental Law (CEDA), Environmental Management and Law Center (Hungary), The Foundation for Development and Environment (Cameroon), The Mexican Center for Environmental Law (CEMDA), OMB Watch (USA), Participa (Chile), and the Thailand Environment Institute.

III. Planning and Housing Strategies for Sustainable and Inclusive Urban Development

Eric S. Belsky, Joint Center for Housing Studies of Harvard University

Recommendations
1. *Commitments*
National governments should:
- Create National Incentive Funds for Integrated Urban Region and Municipal Planning
- Create Financing Innovation Funds to Invest in Innovative Financing Models for Inclusive and Sustainable Urban Development
- Establish National Urban Sustainable Planning and Development Commissions

Need for Action
There are three frequently encountered failures of urban governance and planning capacity that must be addressed. First is the failure to coordinate urban planning at the metropolitan level across different administrative boundaries (city, county, service districts, and state/provincial). Second is the failure to integrate multiple sectors into a systems approach to urban planning (housing, traditional infrastructure, economic development and infrastructure, social development and infrastructure, and natural resources and environment). Third is the failure to involve the urban poor and their organizations as genuine partners in urban planning processes intended to build upon their assets, ensure their participation, improve their living conditions, and reduce their environmental impacts. Given the large share of the urban population that are poor, the difficult and often environmentally vulnerable conditions in which they live, and the economic functions they serve, it is essential to make planning for the urban poor and their communities central to the urban development process.

More Details on Recommended Outcomes
Tackling these failures is not easy, and efforts to do so are constrained by limited public resources and challenges of mobilizing private investment and finance. While the solutions to these failures and resource constraints will vary across nations and urban areas within regions, there is a cross-national need to address these failures and constraints. There are three actions that could be taken by national governments to correct these failures and begin to ease the intensity of these constrains. The goal of these is to create the political commitment, institutional capacity, and financing to engage the public, private, NGO, and community-based civic sectors in developing concrete and integrated plans and investment incentives to promote inclusive and sustainable urbanism.

- **Create National Incentive Funds for Integrated Urban Region and Municipal Planning**. Since most metro regions and individual cities have generally failed to create a long-run vision and plan for inclusive and sustainable urban development, an incentive is needed to get more of them to do so. A national fund that would cover the costs of setting up the appropriate regional and local governance structures and build the capacity for integrated planning would allow more metro regions and cities to undertake such planning and give them the resources to do so. This would not only result in improved planning, but also establish more examples that can be studied and evaluated so that over time efforts to create coordinated and integrated sustainable and inclusive urban plans could be continuously improved. This incentive fund could require some degree of local matching funds and/or a competition for the funds with benchmarks for additional draws to encourage accountability and transparency. There is already a model for such funds operating at the international level called Cities Alliance, which is funded by member cities as well as multilaterals including the UN and the World Bank.

- **Create Financing Innovation Funds to Invest in Innovative Financing Models for Inclusive and Sustainable Urban Development**. The best planning for inclusive and sustainable urban development will fail to produce results without funds and financing models to support them. National governments should identify, invest in, and export successful financing models for slum improvements and sustainable development. Again, these funds could involve competitions with benchmarks for additional draws.

  Governments especially should give consideration to establishing innovation funds that will seed new innovations and be used to scale-up 1) **promising innovations in the financing of housing and infrastructure for the poor** and 2) **more comprehensive and integrated financing tools for sustainable urban development**. Special attention should be paid to housing finance because housing is not only an important platform for health, safety, and economic opportunity but the financing needs of the urban poor to improve their housing falls between microfinance and conventional finance.

- **Establish National Urban Sustainable Planning and Development Commissions**. National governments 1) set the context in which urban governments make decisions and create the authority for urban governments to take action, 2) have capacity to get attention and drive change at the local level where many of the ultimate decisions are made and all the action takes place, and 3) can create incentives and provide legal and regulatory frameworks to drive inclusive and sustainable development at the local level. Therefore, establishing national urban planning commissions would be an important step toward achieving the goal of inclusive and sustainable urban development. This step would result in the development of regional and urban plans and strategies aimed at fostering sustainable urbanism. Establishing these commissions will help elevate the issue of inclusive and sustainable urban development both domestically and internationally, bring a much needed planning focus to efforts to address the complexities of moving towards a more inclusive and sustainable pattern of urbanism, bring transparency to the discussion, and allow learning to be shared cross-nationally. Each country commission would be expected to develop plans that take into account its own resource constraints, political system, culture, current conditions, and market potential. **However, all commissions would have a common charge to be agreed upon at Rio+20 to ensure that all cover the same critical subjects.** While national in scope, the central aim of each commission will be to: a) establish national urban development policies and b) work out and modify laws to produce an optimal division of responsibilities and authorities among levels of government, as well as provide models of how the public, civic, and private sectors can work together to meet plan goals.

Author and Reviewers

November 1, 2011

IV. Transport as Critical Element of Sustainable Development

Michael Replogle and *Colin Hughes, Institute for Transportation and Development Policy*

Recommendations
1. Sustainable Development Goals
- Ensure universal access to sustainable transport though support for safe, affordable public transport and safe, attractive facilities for walking and bicycling.
- Ensure global transport greenhouse gas emissions and transport sector fossil fuel consumption peak by 2020 and are cut by at least 40 percent by 2050 compared to 2005 levels, while ensuring transport contributes to timely attainment of healthful air quality.
- Cut traffic-related deaths in half by 2025.

2. Institutional Arrangements
- **United Nations:** Enhance UN agency coordination around critical sustainable transport tasks to improve effectiveness in global agenda setting, capacity building, data collection, monitoring of progress, technology transfer, regional development, and cooperation with other sectors.
- **Development Agencies and Banks:** Adopt and monitor (1) sustainable transport targets, (2) goals to advance equitable access for all, and report on these targets and goals. Increase support for sustainable transport capacity building and transport sector climate resilience and adaptation.
- **Multi-lateral Carbon Finance Instruments:** Foster transport sector contributions to CO^2 mitigation roughly equal to its 23 percent of energy-related carbon burden by improving transport sector access to carbon finance with sector-appropriate appraisal requirements for CDM, GEF, and CIF funds, and a transport sector window to the Green Climate Fund.
- **Enhance Private Sector Participation:** Foster public private partnerships and implement new business models in support of sustainable transport.
- **Capacity Development:** Strengthen both current voluntary multi-stakeholder partnerships on sustainable transport as well as intergovernmental processes on transport.

3. Commitments
- National governments should take actions, such as setting goals to boost the share of travel by low carbon sustainable transport modes, adopting street and urban design standards to promote sustainable transport and urban development, and encouraging and funding implementation of sustainable transport and land-use plans for cities

The Need for Action

Transportation is key to providing access to opportunities, jobs, and prosperity. Many recent statements recognize the importance of sustainable transport to advance sustainable development, including:

- *Bangkok 2020 Declaration*, endorsed by 22 Asian countries (UNCRD (2010), Bangkok Declaration for 2020: Sustainable Transport Goals for 2010-2020
- *Bogota Declaration*, endorsed by 9 Latin American nations (UNCRD (2011), Bogota Declaration Sustainable Transport Objectives)
- Report of the Secretary General to the UN Commission on Sustainable Development (CSD) 19th Session on *Policy Options and Actions for Expediting Progress in Implementation: Transport*.

Rapid economic development and urbanization are fueling massive growth in transport demand. Current practices of meeting increased transport demand mostly by growing car fleets and road capacity are unsustainable. Transport-related externality costs in developing countries are soaring. Road accident deaths top 1.3 million annually. Of those who die, 9 in 10 are from low- and middle-income countries; half are pedestrians, cyclists, and motorcyclists; victims disproportionately are poor. Fatalities are projected to rise 80 percent by 2020 in low- and middle-income countries (while falling 30 percent in high-income countries), at a cost to the developing world of US $100 billion a year (equal to all current overseas aid from OECD countries).

Transport accounts for 25-80 percent of urban air pollution that leads to respiratory and heart disease and cancer. Air pollution causes approximately 2 million premature deaths worldwide per year, with more than half of this burden borne by people in developing countries. Studies by the IPCC suggest that cuts to greenhouse gas emissions by 50-85 percent below year 2000 levels are needed to limit catastrophic climate change. Yet unless comprehensive changes in policy are made, car ownership will triple to 2 billion, trucking will quadruple, and transport-related greenhouse gases will grow by 80 percent. A 2-degree Celsius climate protection goal cannot be met without a considerable contribution to CO_2 mitigation by the transport sector.

A study by the UNEP shows that sustainable, low carbon, transport initiatives that reallocate just 0.34 percent of global GDP in support of public transport infrastructure and efficiency improvements to road vehicles could cut the volume of road vehicles required to support equal economic activity by one third, cut use of oil‐based fuel by up to a third and boost transport sector employment by 10 percent. As the transport sector already directly provides 5-8 percent of a typical country's total paid employment, with much higher indirect value added and employment in related sectors, there is significant economic development potential from pursuit of such initiatives. The impact of these changes in the structure of transport services on climate change would be to reduce greenhouse gas emissions by 2050 by 68 percent below business as usual trends (and about 36 percent below 2010 levels).

Fuel cost savings and reduced traffic congestion from a sustainable transport program can support added sustainable economic development while boosting access for the poor to opportunities. Such strategies would also cut the huge public health costs of unmanaged motorization – accidents, pollution-related disease, and rising levels of obesity related to physical inactivity. With sustainable transport strategies, transport sector jobs will increasingly be generated through investment in low-carbon transport infrastructure and vehicles, alternative fuels, and telecommunications and other technologies. A study found public transport spurs 70 percent more jobs per unit of investment than building new roads; road and bridge maintenance creates 16 percent more jobs than new construction.

The technologies and policies needed to obtain these sustainable transport benefits are well known, proven to be effective, and often come at a small or net-negative cost when accounting for fuel cost savings and other co-benefits. Yet they do require a commitment to concerted action. In the absence of a transport sector specific Sustainable Development Goal, neither development assistance nor

carbon-finance have focused effectively on many available low-cost opportunities for progress in transport.

More Detail on the Proposed Outcomes

Achieving the proposed **Sustainable Development Goal** necessitates a global commitment to a set of best practices and strategies contained in new sustainable transport paradigm, known collectively as "Avoid, Shift, Improve" (ASI). The ASI Best Practices focus on **avoiding** unnecessary motorized trips with smarter planning, pricing, and technology; **shifting** trips to more sustainable modes through price incentives, better information, and improved service quality; and **improving** vehicle efficiency with cleaner fuels, improved network management, and more efficient vehicle technology. All the elements of ASI have been demonstrated at scale. Successful examples of this include Bus Rapid Transit, bicycle-sharing and bikeway networks, integrated land-use/transport planning, parking limitations and management, smart parking and car-sharing, vehicle registration quotas, congestion pricing, vehicle emission standards, and intermodal freight efficiency and logistics systems.

Potential national actions may involve institutional capacity building, expanding use of public-private partnerships, innovative financing, and integration of multiple sectors into a systems approach to urban planning. It also includes shifting subsidies and investments from fossil fuels, roads, and private motor vehicles to instead favor sustainable transport, targeted user-side-subsidies, climate resilient transport, and pro-poor development, with sound transport pricing.

Author and Reviewers

These recommendations were prepared by Michael Replogle and Colin Hughes of the Institute for Transportation and Development Policy (ITDP), a non-profit group that works with cities worldwide to bring about sustainable transport solutions that cut greenhouse gas emissions, reduce poverty, and improve the quality of urban life. The authors thank the Partnership for Sustainable, Low Carbon Transport (SLoCaT) and several of its members who actively reviewed and commented on earlier drafts of this statement.

V. The Role of Information & Communications Technologies (ICTs) in Creating Smart Sustainable Cities

Diana Lind, Next American City

Recommendations

1. *Sustainable Development Goal*
- By 2020, every major city should become a "smart" city that enables all of its residents to have electronic access to sustainability data and governmental decision-making.

2. *Institutional Arrangements*
- A new global smart cities initiative should be established to assist local governments to access and implement best practices for using ICT to achieve sustainability

3. *Commitments*
   Governments at all levels should:
- Create databases of critical information on transport, housing, waste, sanitation, and other urban sustainability issues. These databases should be readily available to the public;
- Develop and expand programs to enable the public to provide information electronically on

    sustainability issues, such as pollution and transportation needs, to governmental decision makers;
- Ensure that ICTs are available to poor and disenfranchised groups and people.

Need for Action

As cities today grow in size and complexity, their governments are tasked with becoming more environmentally sustainable, livable, and economically vibrant. In an effort to become more effective and efficient in this competitive environment, governments are increasingly turning to information and communications technologies (ICTs) to maximize their natural and financial resources. City governments may not have much cash but collect a wealth of data on a range of civic issues, such as transportation and energy use, housing, and crime and health statistics. Some tech-savvy cities have been quick to analyze this data to better inform decisions on where to build a hospital, allocate police presence, add transportation routes, or locate a public park. But many more cities still lack the ability to analyze their data, engage the public in the decision-making process and become more sustainable as a result.

A variety of actors, including governments, corporations, non-profit organizations, and individual citizens are using ICTs to improve the quality of urban life. Here are interesting examples:

- The cities of New York and Washington, D.C. created competitions to develop apps that make the use of public transportation and public spaces more convenient, make it easier to avoid restaurants with health code violations and enable people to sign local petitions on a cell phone.

- Singapore uses real-time traffic data gathered from smart phones to locate and predict traffic congestion, inform individual drivers and suggest alternate travel routes. This data can also be used to improve traffic engineering.

- In India, a non-profit organization uses a text-message program to notify residents about local piped water delivery, making it easier for citizens to access clean water.

- Near Fukushima, Japan, citizens who lack trust in the government's information have used their own Geiger counters and open-source software to compile their own map of radiation hotspots around the crippled nuclear power plants there.

More Details on Proposed Outcomes

While ICTs have the potential to improve cites' sustainability, to increase civic engagement, and to support governance decisions, many cities are unaware of or unable to harness these technologies. A new global initiative that engages the United Nations, The World Bank, leading national and local governments, corporations and key non-profit organizations should work together to determine best practices in this field, fund the expansion of ICTs for sustainability purposes, and ensure broader public access to public data.

Author and Reviewers:

Diana Lind is Executive Director of Next American City, a Philadelphia-based national nonprofit organization helping to improve the social, economic and environmental character of cities by reporting on best practices in areas such as transportation, housing, governance, and sustainability. The following reviewers contributed ideas and commentary on these recommendations: Nick Grossman, Civic Commons; Colin Maclay, Berkman Center for Internet and Society, Harvard University; Benjamin de la Pena, Rockefeller Foundation; Anthony Townsend, Institute for the Future; Ethan Zuckerman, Center for Civic Media, MIT.

VI. Putting Urban Metrics into Sustainable Development Indicator Systems

[Eugenie L. Birch](#) and [Amy Lynch](#), University of Pennsylvania

Recommendations
1. *Sustainable Development Goal*
- By 2020, all countries will adopt sustainable development indicator systems that include urban metrics scaled to national, provincial/regional and local goals as appropriate, measure their progress regularly, and report the findings publicly.

2. *Institutional Arrangements*
- The United Nations should create and maintain a dedicated database of nations' sustainable development indicator systems and of urban sustainability indicator systems.

3. *Commitments*
- National government should include and support the creation of urban metrics in their sustainability indicator systems.

Need for Action
Failure to include urban concerns and related indicators (e.g. presence of services in peri-urban settlements, the availability of affordable urban housing and accessible transport, the percent city development on vulnerable or polluted land), in setting goals, policies, and programs will result in failure to achieve sustainable development. Information about sustainable urban development is widely available – we know how to engage in land suitability analysis, to build compact cities that have "smart" transportation, affordable housing. In addition, we understand that urban sustainable development requires regional actions (e.g. supporting green infrastructure investment to protect the water supply and assure food security) and national policy (e.g. carbon pricing or other environmental protection or sound fiscal and monetary policies) Through advances in information technology, we have the ability to build consensus around sustainable development goals and to monitor quickly the results of particular policies and programs. What we lack is the management capacity and political will to apply and manage these policies. We also lack a central repository that collects already accomplished and ongoing work in this area. The UN Division of Sustainable Development (DSD) has created a website (http://www.un.org/esa/dsd/dsd_aofw_ni/ni_index.shtml) to track sustainable development efforts, but it is out of date as the last entries were in May 2010.

More Details on Recommended Outcomes
While not a panacea, indicators that include urban metrics are an important tool to be used in forging the political will and measuring performance on sustainability that in the next decades is inextricably associated with cities. There are a number of successful systems, including in cities such as Vienna, New York, and organizations, such as ICLEI. The creation of a centrally located, easily accessed database of demonstration and best practices processes and associated materials within the United Nations will promote global knowledge-sharing and advance the work.

Authors and Collaborators
These recommendations were developed by [Eugenie L. Birch](#), Nussdorf Professor of Urban Research and co-Director, Penn Institute for Urban Research, University of Pennsylvania, and [Amy](#)

Lynch, PhD candidate, University of Pennsylvania. Birch and Lynch have been working with the Office of International Affairs and Philanthropy, U.S Department of Housing and Urban Development and others on understanding and developing sustainable urban development indicators for the United States. Birch's most recent books are *Global Urbanization* (2011), *Women's Health* (2011), *Growing Greener Cities* (2008) and *Rebuilding Urban Places after Disaster, Lessons from Hurricane Katrina* (2006). Lynch is completing a dissertation on green infrastructure.