

ENERGY AND CLIMATE PARTNERSHIP OF THE AMERICAS



URBAN PLANNING INITIATIVE



URBAN PLANNING

as a tool to foster sustainable development across the Americas



American Planning Association

Making Great Communities Happen

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FROM THE AMERICAN PLANNING ASSOCIATION



W. Paul Farmer, FAICP
Chief Executive Officer

For over 100 years, APA has been committed to people and places. Through research, education, and programs like the Energy and Climate Partnership of the Americas, we work to improve the quality of life for people in cities, towns and rural areas. APA now has members in over 85 countries and has expanded our international efforts. APA's work in other countries affords us opportunities to learn, share ideas, and seek commonality while respecting differences of geography and culture. In this urban century, we must continue to ensure future generations have the opportunity to shape their own quality of life based on our good decisions.

As you read through these pages, you will learn how planners are at the forefront of a movement to build energy-efficient, livable communities of value throughout the Americas. When President Obama established ECPA, the Department of State reached out to a variety of organizations – they knew such an initiative required a comprehensive approach. By partnering with APA, the Department of State recognized that comprehensive planning is a key requirement to address a variety of issues including cultural and environmental conservation, energy and climate change, housing, and economic opportunity.

Planning is much more than the layout of physical infrastructure and buildings: it is the careful analysis and integration of social, economic, and physical features that leads to a variety of better outcomes than an uncoordinated approach. The process of partnering with various organizations and institutions and learning from different planning models across the Americas will help inform our profession for years to come. Success will be measured beyond this initial program by the long term partnerships, institutional capacity and civic leadership to better serve the needs of citizens and create communities that provide good choices – both at home and abroad.



John Reinhardt, AICP
ECPA Program Manager

As the world becomes increasingly urbanized, the planning profession finds itself at an important moment in determining the future for billions of city residents. President Obama's Energy and Climate Partnership of the Americas provides urban planning professionals and academics the opportunity to form and sustain long-term partnerships and share best practices for promoting healthier, safer, more energy-efficient, and inclusive cities through their involvement with APA.

Good planning is not achieved in isolation, as the U.S. Department of State realized when they chose to make urban planning a key part of the ECPA initiative. Through educational exchanges, training, technical assistance, and institutional capacity building at home and abroad, APA delivers a series of activities that highlight key lessons on planning for climate change, energy, and sustainable economic development.

The success of this program is based on participation and collaboration. We hope that you will join the partnership as we promote urban planning as a tool to foster sustainable communities across the Americas.

Supporter and Facilitator: U.S. Department of State

The U.S. Department of State, led by Secretary Hillary Rodham Clinton, carries out the Obama administration's foreign policies on behalf of the American people. The Bureau of Western Hemisphere Affairs is led by Assistant Secretary of State Arturo A. Valenzuela, responsible for managing and promoting U.S. interests in the region by supporting democracy, trade, and sustainable economic development and fostering cooperation on issues such as citizen safety, democratic institutions, the rule of law, economic and social inclusion, energy, and climate change.



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ECPA URBAN PLANNING INITIATIVE

According to the United Nations, 81% of the population in Latin America currently lives in cities, making it the most urbanized region in the developing world. Between 1975 and 2000, the Mexico City metropolitan area added 7 million residents, and between 1970 and 1990, Sao Paulo's metropolitan population nearly doubled. Motorized vehicles have become ingrained into the cultures of many cities, endangering air quality and straining infrastructure. Forest area in South and Central America continues to decline as land is consumed for agricultural uses and urban development to support burgeoning populations.

As Latin American countries experience continued growth and urbanization, there is a realization of the need for integrated, humanistic, and climate-proof planning. Virtually every city in Latin America and the Caribbean is in need of comprehensive planning to address the challenges of energy production, natural disasters, and climate change.

Recognizing these challenges, United States President Barack Obama proposed the Energy and Climate Partnership of the Americas (ECPA) at the 2009 Summit of

the Americas in Trinidad and Tobago, and Secretary of State Hillary Rodham Clinton expanded the initiative at the Energy and Climate Ministerial of the Americas in April 2010. ECPA seeks to encourage the broader use of renewable energy, manage forests sustainability, improve land use, and encourage low-carbon growth and climate change adaptation throughout the Americas and Caribbean.


The American Planning Association (APA) is a U.S.-based, independent, not-for-profit educational organization that seeks national and international partnerships to advance the planning movement and build sustainable communities of lasting value. APA advocates excellence in community planning, promotes education and citizen empowerment, and provides tools and support necessary to meet the challenges of growth and change. With the support of the U.S. Department of State, APA promotes urban planning as a tool to foster sustainable, climate-proof development across the Americas. APA leads activities and programs designed to advance institutional capacity and improve long-term access to planning expertise and technical assistance in Latin America and the Caribbean.

The path to sustainable cities—more energy efficient, adaptive to climate change, economically diverse, and accessible to the citizenry—is built upon a cultural and institutional base of comprehensive urban and regional planning. Planning furthers the welfare of people and their communities by creating equitable, healthful, efficient, and attractive environments for present and future generations. Planners analyze issues such as transportation, land use, housing, open space, natural and cultural resources, community services, population, and economic development to create sustainable communities that reduce environmental impact, protect natural environments, and improve the quality of life for residents. Numerous cities in Latin America have recognized the benefits of energy and climate planning, creating plans and implementing policies that contribute to the creation of sustainable urban environments.

With Brazil and the United States taking leadership positions, countries and cities across the Americas are learning from each other through ECPA initiatives. Economic development, renewable energy, and citizen safety are issues that all planners must address, whether they live in Lima, Peru or Lima, Ohio; Georgetown, Guyana or Georgetown, Kentucky. The positive developments in Latin America continue to demonstrate that planners in the Americas and the Caribbean have much to gain through international cooperation.



W. Paul Farmer, FAICP (APA), Kevin Smith (U.S. Department of State), Ana Marie Argilagos (U.S. HUD), Marcio Fortes de Almeida, (Brazilian Ministry of Cities), Shalini Vajjhala (U.S. EPA), Júnia Santa Rosa (Brazilian Ministry of Cities), and Shelley Poticha (U.S. HUD), in Rio de Janeiro



APA National Planning Conference, Boston, USA: Several sessions including “Working on Planning in Latin America,” “Building Planning Capacity in the Americas,” and “BRT in Context: Colombia and New York” will focus on Latin America and the Caribbean. These sessions will provide opportunities for professionals to learn more about cultures of planning and opportunities for working in Latin America. Speakers include APA staff members Jeffre Soule, FAICP, John Reinhardt, AICP, and Thomas Basset; Clara Irazabal of Columbia University; and Stewart Sarkozy-Banoczy of U.S. HUD. The winners of the ECPA Call for Essays will also present their work. *Read the essays on pages 12 - 19.*

Columbia University GSAAP, New York, USA: APA has provided academic support to a studio in the Urban Planning program at the Columbia University Graduate School of Architecture, Planning, and Preservation. This studio focuses on a major petrochemical plant development outside of the city of Rio de Janeiro, Brazil, estimated to bring 200,000 direct and indirect jobs to the underserved area. The studio’s client is CONLESTE, the local council of governments, and they are also engaging with the Federal Fluminense University, UN-HABITAT, and Petrobras, the Brazilian oil company funding the plant. The students seek to lessen the negative social and environmental impacts of the plant while sustainably developing a rapidly growing area.

Sustainable Urban Housing Competition, Washington, DC, USA: Ashoka Changemakers, with support of the Rockefeller Foundation, in collaboration with the U.S. Department of State, HUD, and APA, developed the Sustainable Urban Housing: Collaborating for Livable and Inclusive Cities competition to inspire innovations that address the lack of inclusive housing and pioneer energy-efficient and sustainable models for housing design and finance, community planning and engagement, and public policy. *See page 10 for more information.*

Renobacion Urbano workshops, Aruba: Through a close partnership with the Royal Netherlands Embassy, APA partnered with the Government of Aruba to produce the first series of public participation workshops on urban revitalization in Aruba. The Renobacion Urbano workshop series, funded by the Aruban government, focused on lessons in transportation planning, green economic development, and community development. The workshops were followed with an academic studio from the University of Pennsylvania. Outcomes can be viewed at www.renobacionurbano.com.

Regional Critical Energy and Climate Dialogue and ECPA Meeting, Panama City, Panama:

In April, APADirector of International Programs, Jeff Soule, FAICP, joined colleagues from Latin America and the Caribbean to take stock of progress made across the region and update each other on collaborative and joint initiatives. The meeting served as a platform to identify country coordinators for ECPA to work closely with the Organization of American States Information Clearinghouse. The attendees also planned for the next Energy and Climate Ministerial hosted by Colombia in April 2012. Highlights of the meeting included a panel on energy efficiency, poverty, infrastructure, and land use and a second panel on forestry, climate change/adaptation, cleaner fossil fuels and renewable energy. A summary of the results of the discussions will be posted at ecpamericas.org.

Regional Professional Collaboration, Georgetown, Guyana: In April, APA partnered with the Canadian Institute of Planners and the University of the West Indies to gather planners, government officials, and representatives of planning institutions in the Caribbean, Canada, and the U.S. This meeting brought together the fourteen member nations of CARICOM (the Caribbean Community) to develop partnerships that will engender a hemispheric perspective on planning. Nine nations – St. Lucia, Belize, Grenada, Montserrat, Dominica, Trinidad, Jamaica, Guyana, and Suriname – have confirmed their representatives.

Sustainable Urban Planning and Energy Efficient Construction for Low-income Areas of the Americas, Rio de Janeiro, Brazil: In November, in conjunction with the U.S. Department of State and the Brazilian Ministry of Cities, APA invited leaders in government, NGOs, and academia to commence the ECPA Urban Planning initiative. Discussion sessions and panels focused on policy, climate mitigation, sustainable construction, and social and environmental equity.

Sustainable Economic Development, Curitiba, Brazil: In June, APA will be co-hosting a conference with the city of Curitiba, Brazil on Planning for Sustainable Economic Development Across the Americas. The two-day conference will bring together professionals, academics, and private companies from the Americas for an exchange of ideas on becoming green and growing economically. Curitiba has been an international leader in urban sustainability for decades, and this conference seeks to foster innovation for cities in the region.

Additional ECPA urban planning activities

- Academic Network Retreat, New York, USA, May 14
- ECPA Exhibit Opening, Columbia University Studio X, Rio de Janeiro, Brazil, June 10
- Technical assistance and training programs, summer and fall 2010

FROM THE EXPERTS



Ana Marie Argilagos is Deputy Assistant Secretary of the Office for International and Philanthropic Innovation (OIPI) at the U.S. Department of Housing and Urban Development. She oversees the establishment of OIPI as it looks outside the federal government to inform the domestic work of HUD and the Office of Policy Development and Research. OIPI is charged with engaging partners in the international and philanthropic sectors to harness people, organizations, ideas, and resources for the benefit of our communities. Ana Marie is also responsible for engaging with stakeholders in the non-profit and for profit sectors on comprehensive strategies for viable and livable communities.

Through your role at HUD, how do you work to promote sustainable development?

OIPI is charged with building new capacity and clarity within HUD to learn from the best that philanthropic and international organizations have to offer to transform places of disinvestment into places of opportunity. With that mission, we use the best available evidence, innovations, and lessons to assure HUD achieves long-term community-building results and return on taxpayer dollars, supporting a “triple bottom line” approach – financial, social, and environmental accountability. We also develop collaborations that align ideas, investments, and resources for transformative and sustainable development. Our most immediate connection to sustainable development is HUD’s new Office for Sustainable Housing and Communities (OSHC). We work very closely with OSHC to leverage the knowledge, networks, and investments that can truly nurture healthier and more inclusive communities.

OIPI is also developing a set of global sustainable urban development indicators with the help of university researchers, interagency colleagues, foundations, and non-profits to evaluate successful sustainable urban development and revitalization strategies. We hope to develop indicators that municipalities and regions can use to serve both domestic purposes and the needs of the global community. We are compiling best practice toolkits and a knowledge base for future sustainable and inclusive urban development, all while improving and informing domestic housing and urban development policy.

How can governments and the private sector work together to promote this type of development?

There are places doing this already and learning from other sectors and other countries through

our various initiatives allows HUD to assist these efforts. Beyond these initiatives, we broker partnerships with civil society – foundations and international partners – to align and leverage resources to ensure that sustainable development funding is strategic and targeted. This alignment allows HUD to be more effective at transformation, enacting change and increase scale. For example, HUD’s Sustainable Communities Initiative has led to the coordination of federal housing and transportation investments with local land use decisions to reduce transportation costs for families, improve housing affordability, save energy, and increase access to housing and employment opportunities. The initiative will stimulate more integrated and sophisticated regional planning to guide investments in land use, transportation, and housing, and challenge localities to undertake land use reforms. This effort requires unprecedented partnerships, across agencies, the private sector, and civil society, to foster and encourage local innovation while providing resources and tools to help communities realize their own visions for building more livable, sustainable regions.

What has HUD learned at the international scale from the Sustainable and Inclusive Housing Prize Competition that is applicable to its domestic mission?

One key goal of the Sustainable and Inclusive Housing Prize Competition is to link the results and outcomes with OSHC domestic sustainability efforts and develop deep knowledge exchange. This will provide HUD and the broader field with opportunities for learning, surfacing innovations and new ideas on policy, practices, and tools and transferring knowledge to US practitioners and policymakers.

The competition is a prime example of the alignment of partners to seek out best practices both domestically and globally. It has stimulated new

thinking and developed lessons from global thinkers to revitalize neighborhoods through mixed-income and mixed-use strategies. It is our hope that the competition will encourage domestic and global adaptation of innovative approaches and building technology in low and middle-income housing and communities to create solutions that can be scaled, vetted, and implemented across the globe.

The competition is also lifting up innovative ideas to address urban development needs for planning, policy, process, and housing both domestically and globally. It builds on the Administration’s focus on prizes as a strategy for sourcing and promoting innovations that pair affordable, inclusive, and sustainable ideas for housing with implementable plans for replication, adaptation, and scalability. We hope to build on the innovative lessons from the competition by partnering with organizations to test the applicability and transferability of the most innovative entries in various urban environments. We’ll continue to add to the growing knowledge with direct application to HUD and its domestic partners and we are looking at additional phases for the competition. This competition and any additional phase will provide HUD and partners with opportunities for field building, with transferable knowledge for U.S. cities and additional information about implementation of new and innovative policies, practices and tools.

How would you encourage young persons who are interested in addressing the challenges of climate change through urban planning?

It is clear that there is a new mandate for American cities in the framework of sustainable development. In order to compete on the global scale and out-educate and out-innovate, we need the coming generations of public and private sector workers to be versed in sustainable urban development and thinking in new ways. Our cities will only grow, and their impact on the environment is greater than anything else as we move through this century. Young people interested in urban planning must be well-versed in the sustainable development framework that will give us healthy, viable cities for the foreseeable future, so we can reduce the negative impact as our population swells in urban cores. We want these talented people at HUD as we transform the way we are working in cities large and small to define this next era and create many more “sustainable development generations.”



Patricia E. Salkin, Esq. is the Raymond & Ella Smith Distinguished Professor of Law, Associate Dean, and Director of the Government Law Center of Albany Law School. Dean Salkin is a nationally recognized scholar on land use law and zoning. She is the author of numerous books, law review articles, and book chapters on a range of topics including sustainable development. Salkin is an appointed member of the U.S. Environmental Protection Agency's National Environmental Justice Advisory Council. She has consulted on land use issues for many organizations and is the author of the blog *Law of the Land*: lawoftheland.albanylaw.edu.

In *Climate Change and Sustainable Development Law in a Nutshell*, you seek to demonstrate the close relationship between sustainable development and climate change management. In what ways are these two fields connected?

Sustainable development is really a broader reframing of the policies and principles of the smart growth movement, which followed the growth management movement and the shift in interests towards regionalization or at the least the realization that the impacts of our land use decision-making are inter-related. Climate change management and adaptation, from a land use perspective, applies many of the same principles and strategies from the smart growth toolkit. For example, to reduce CO2 emissions, compact planning, conservation subdivisions, transit oriented development, and walkable communities are just a few illustrative examples of key smart growth strategies that are important for effective climate change management.

You have stated that climate change law and emissions reductions “generally do not engage the planning profession or include the techniques that are the stock-in-trade of planning law.” Why do you think this is the case?

At the international and national levels (including the various states) a good part of the climate change policy developed has focused on cap-and-trade issues and carbon tax policies. These are corporate and economic issues, and while important, do not get to the heart of what planners do. Similarly, policies that support funding for the development of clean-tech and alternative fuels as well as vehicles that run on alternative fuels, are not land use planning issues.

Why do you think there is so much aversion to climate change laws in the U.S.?

This is a very difficult political and economic issue that calls into play national and international corporate interests and agendas.

These types of considerations make consensus on hard targets and goals (e.g., GHG emission reductions) a major policy challenge. The issues also cross over many federal agencies, many congressional committees, and diverse industry and NGO interests.

Why do you think climate change can best be addressed at the scale of the city?

We believe that the ability to act immediately to achieve CO2 reductions rests with local governments through their planning and land use control authority. Local governments need not wait for international

treaties or federal legislation that calls for reduction targets. Rather, local governments can modernize zoning and land use regulations, as well as building code regulations, to implement effective strategies that will accomplish GHG reductions and proactively prepare communities for sea level rise changes and other adaptation pressures that may result from global warming.

How can planners build the knowledge needed to address climate change?

There is a wealth of terrific information available on the Internet, and APA offers timely and cutting-edge workshops and programs. While there are many fee-based courses and programs from many providers, I recommend reading articles and case studies from reputable sources, checking government Web sites (such as the U.S. HUD-EPA-DOT Partnership for Sustainable Communities) periodically for new case studies and best practices, and attending programs sponsored by advocates and representatives of all stakeholder constituencies. Planners should also share their knowledge with each other through multiple information outlets.

A BRAZILIAN PERSPECTIVE

Through your role in the Brazilian government, how do you promote sustainable development?

For five years I worked in the Ministry of Cities of Brazil, where I was part of the Growth Acceleration Program (PAC). PAC is responsible for huge investments in slum upgrading projects across the country, guaranteeing low-income families access to basic services (water, sanitation, drainage), land regularization, and better homes. These projects make huge improvements in the quality of life in cities, eliminating risk areas and recuperating watershed areas.

I am now the Director of Cultural Infrastructure of the Ministry of Culture of Brazil, responsible for the management and implementation of 800 intersectoral public squares in vulnerable areas of Brazilian cities. These squares integrate cultural, social, and public amenities such as libraries, movie theaters, classrooms, and sports facilities. They provide public services to vulnerable areas (peripheries, slums, low-income neighborhoods) and give families access to previously inaccessible services.

How can municipal, state, and national governments and the private sector work together to promote this type of development?

Brazil has developed important projects in the last few years based on federative pacts through which municipal, state, and national governments agreed to work together on specific projects, changing the idea that each level has its own territory and that the population is the responsibility of them all. These pacts were developed with all political parties – even opposition parties. Guaranteeing a trustful space for discussion is the best way that governments, at all levels, can promote cooperation.



Cid Blanco Jr. is an architect and urbanist (1998, FAU USP) with specializations in planning and management of urban poverty reduction programs (2001, IHS Netherlands) and a Master in Architecture and Urbanism (2006, EESC USP). He is Coordinator of Cultural Infrastructure of the Executive Secretariat of the Ministry of Culture of Brazil. He was a member of the staff of the Ministry of Cities of Brazil from 2006 to 2011 as Chief of Cabinet of the National Housing Secretary and worked in municipal housing policies, fundraising and international affairs, and participatory strategic planning.

FROM THE EXPERTS



Nicolás Maggio is a sociologist specializing in the areas of housing, poverty, and energy. He is the founder and president of FOVISEE, Social Housing and Energy Efficiency Forum, a nonprofit organization based in Buenos Aires. FOVISEE generates and manages projects to achieve energy savings in affordable housing, improve resident's quality of life, foster care for the environment, and reduce greenhouse gas emissions. www.fovisee.com

Through your role at FOVISEE, how do you work to promote sustainable development?

FOVISEE is a non-governmental and non-profit organization which synthesizes the topics of housing, energy, poverty, and environment in order to create the basis for cultural change. We conduct field projects which result in low-income housing that saves energy and improve the quality of life of families.

The three axes of sustainability (social, environmental, and economic) have close ties with housing and energy. A house which wastes less energy improves the health of its inhabitants and the household economy, raises the amount of energy available for others, and avoids the emission of tons of CO₂ during its useful life. In poverty contexts, problems related to energy, housing, and environment are more urgent and profound: the housing problem is intrinsic to poverty, the energy crisis has its strongest impacts on poorer families, and the environmental problems have clearer and more direct effects.

In this context FOVISEE promotes energy sustainability in low-income housing. FOVISEE demonstrates that, by taking energy-efficiency into account with minimum additional costs, one can achieve powerful results:

- Energy: Over 50% energy savings through new, low-cost technologies
- Social and economic aspects: Energy savings alleviate pressures on household budgets. Energy security affords

a better quality of life, creates a more pleasant home environment, and improves family health.

- Environmental aspect: By using energy efficiently and making use of solar energy, energy consumption also decreases by 50%. If this reduction is multiplied across the thousands of housing units built annually in Argentina, CO₂ emissions could be significantly reduced within a few years.

What is the role of NGOs in promoting this type of development?

FOVISEE encountered a context in which the Argentine state builds around 36,000 new social housing units annually. Construction is based on living space needs and a reduced budget and does not include energy-efficiency criteria. Thus every year Argentina adds thousands of homes that will waste energy for decades. In our case, national authorities are not leading sustainable development policies.

In the private sector few specialists develop energy-efficient housing. These individuals and firms generally focus on new, highly ex-

Urban planning is one of the greatest opportunities to address climate change. Cities and housing programs are planned to last decades and even centuries, so if there is an area vital to include as much sustainable criteria as possible, this is urban planning.

pensive houses which usually follow foreign standards. Social housing might be an attractive business to a particular group of firms, but sustainability criteria are not requested by the general public or official codes.

In the academic field, very few professionals have knowledge of energy-efficient housing, and even fewer work in low-income energy-efficient housing. They generally conduct research in theoretical arenas or applications of new, rare, and expensive materials.

The role of NGOs is crucial in our context. Organizations such as FOVISEE build partnerships and networks that include the public, private, academic and social sectors. NGOs, independent of the profit motive and political trends, can lead the charge to include energy sustainability in low-income housing in the national agenda of priorities. When this task is achieved, the role of NGOs such as FOVISEE will be to transfer our knowledge to governmental, private, and community institutions to replicate sustainable housing models and practices on a mass scale.

What specific strategies have you found most successful in overcoming obstacles to the implementation of sustainable development?

Identifying these obstacles was our first strategic task. In our context, the main obstacle regarding sustainability and housing is not economic but cultural. The barriers have to do with lack of information, experience and awareness regarding:

- The specific reality of how low-income households satisfy their energy, water, and waste disposal needs (to address this, FOVISEE develops applied research to guide each of the field projects);
- The potential that sustainable building together with users' practices and habits have for improving the quality of life and health of families and saving energy and money (we have demonstrated savings of over 50%); and
- The potential that sustainable criteria have regarding the environment (decades of reduced CO₂ emissions).

At the same time, there are myths which function against sustainable development in low-income areas. Many people (including the general public, officials, and specialists) think sustainable housing must lead to exorbitant costs. They assume very sophisticated technology must be involved, related to the new and unknown and believe that sustainable housing must be related to what they call the “intelligent house,” managed online, fully computerized, using special software technologies.

So after identifying these obstacles, the next task for FOVISEE was to demonstrate that:

- In fact there is already a tremendous investment in social housing, so one should maximize existing funds through sustainable criteria;
- Energy-efficiency is above all a viewpoint: there are not necessarily sophisticated unknown technologies or materials involved, simply bi-climatic criteria to be taken into account; and
- The first step must go first: before thinking about an “intelligent house” we must achieve an *intelligent use of the house we have*, especially in poverty contexts.

We demonstrated that these ideas were myths by building concrete, applied, measured, and diffused experiences and projects. Our field pilot projects work as “living labs” through which all technical and social issues are measured before and after to test design, materials and technological models for energy-efficient, low-income housing. These field projects are all planned with a special focus on people. We conduct qualitative and quantitative research on uses, habits, and customs of households and offer programs to teach people how to use their homes in a sustainable way. We identified dozens of normative practices in average low-income households which are not efficient. Thus FOVISEE has begun to design the “Instructions manual for a sustainable use of the house” as a low cost and scalable tool to improve sustainability in housing.

Our second strategy to overcome barriers to is to promulgate these ideas and results. We created a culture, education, and communication area to develop public dissemination opportunities to raise awareness and transfer knowledge, with direct participation of thousands of persons around the world. Some examples are our Seminars on Affordable Housing and Energy-efficiency – international

meetings where experts, scholars, government officials, and company executives gather to exchange ideas and experiences – our Web site, our education programs in poor neighborhoods, and our instructions manuals. By raising awareness we can change consumption patterns and reduce waste. The public sector, the private sector, specialists, and the community gradually become involved and contribute to add energy-efficient affordable housing to the national agenda.

How would you encourage young persons who are interested in addressing the challenges of climate change through urban planning?

Urban planning is one of the greatest opportunities to address climate change. Cities and housing programs are planned to last decades and even centuries, so if there is an area vital to include as much sustainable criteria as possible, this is urban and housing planning.

In many ways, sustainable urban planning is a new idea, about which we are all learning. This presents a great opportunity, specifically for young planners, to create new solutions and improve existing cities. In contexts of poverty, where resources are scarce, creativity becomes even more important. One can say almost everything in this area is still to be invented.

The major risk for innovative solutions is to be born and die in theory. Thus it is very important that young urban planners take into account reality and feasibility as main guiding principles in their projects. But the “real” world may be discouraging: one has to face scarce resources, economic and political interests which might be antithetical to sustainability, and a lack of knowledge. To apply theories and ideas one must be willing to negotiate with reality in order to change it and assume that change will be more gradual and slower than the ideal.

Experience has taught us that the best way to identify and build a strategy towards existing barriers regarding sustainability in housing is putting ideas into action; moving from theory to practice. During this process unpredicted obstacles appear and feasibility is tested. This is why we consider “living labs” crucial to our work. Experience has also taught us to give the same importance to both technical and social aspects. By “social” we mean uses, habits, and customs of households. There are many cases in which a technology works perfectly, but the dislike or lack of knowledge of people towards it makes it fail or malfunction.

So the advice would be: be creative, don’t forget about reality, and be open to negotiate with it.

A PUBLIC HEALTH PERSPECTIVE

Sustainable development helps promote the health of all residents of a community, across ages and abilities. By elevating sustainable development, we can ensure access to clean water, safe transportation, medical care, and education, which results in innumerable health benefits. Communities with large numbers of vulnerable populations particularly benefit from reductions in health inequities following years of unsustainable, poorly executed development.

At the same time, urban planners and public health practitioners have a unique opportunity to augment health and wellness by helping to put communities on a more sustainable and healthy footing. A shared planning and public health vision can address health inequities faced by cities, such as roadway fatalities, unhealthy homes, a lack of social cohesion and limited opportunities for physical activity. New professionals entering both the planning and health fields can help ensure that an intersectoral dialogue becomes ingrained in their daily work, and that sustainable development equals healthy development. The intersection between urban planning and public health can lead our communities to a more sustainable, prosperous, and healthy future.

Georges C. Benjamin, MD, FACP, FACEP (E), is executive director of the American Public Health Association, the oldest and most diverse organization of public health professionals in the world. Prior, Dr. Benjamin served as secretary of the Maryland Department of Health and Mental Hygiene.



SUSTAINABLE URBAN HOUSING

By 2050, three out of four people in the world will live in cities. As the engines of the global economy, cities offer migrants jobs and livelihoods. Residents, in turn, offer a diverse pool of human capital, talent, entrepreneurship, and innovation upon which cities can grow. But most cities, particularly in the developing world, are not prepared for this dramatic growth.

One billion people now live in slums, largely as a result of inadequate planning, poor policies, market failures, and gaps in governmental capacity. Cities that develop strategies to meet the critical shortage of affordable, sustainable, and inclusive housing and address the challenges of energy constraints and climate change will raise living standards, create more livable communities, and reduce environmental impact.

Identifying new strategies and long-term investments to address issues of housing, sustainability, and energy efficiency not only unleashes economic opportunities for the urban poor, but also creates renewable energy, cleaner fossil fuels, and low carbon development to build more resilient, livable communities for millions worldwide.

In anticipation of the 2012 Summit of the Americas, and in support of U.S. President Barack Obama's Energy and Climate Partnership for the Americas (ECPA), Ashoka Changemakers, with support of the Rockefeller Foundation, in collaboration with the U.S. Department of State, HUD, and APA, launched **"Sustainable Urban Housing: Collaborating for Livable and Inclusive Communities."** This global competition inspired innovations that address the lack of adequate and inclusive housing and pioneer energy-efficient models for housing design, construction, land use, community planning, housing finance, community involvement, and public policy. It sought new models for meaningful and effective collaboration to integrate the work of community leaders, urban planners, academics, transportation specialists, financial institutions, architectural and public policy professionals, and local governments.

The competition focused on Latin America and the Caribbean, the most urbanized region in the developing world. Finalists included several projects from this region.



Sume Materiales (Incorporate Materials)
Fundacion Sagrada Familia
Argentina
www.sagradafamilia.org.ar

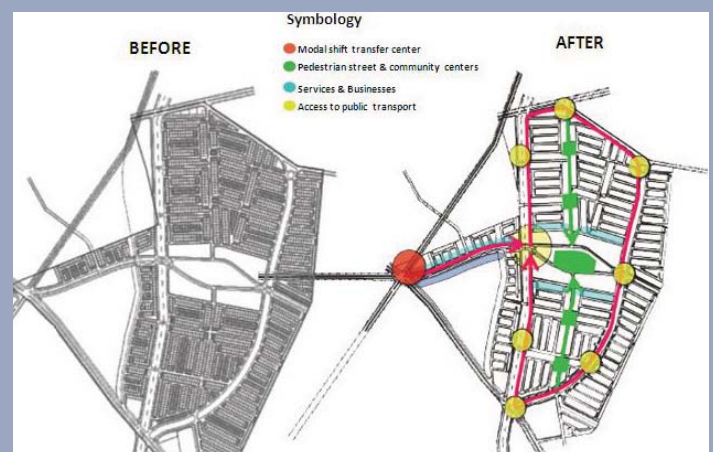
Sume Materiales (SM) is a program which makes it easier for low-income families to purchase materials for the construction or renovation of their own homes. Since 2004, we have worked to reuse materials and provide them to families living under deficient housing conditions. We receive donations of disused and residuary materials, as well as of discontinued and residual articles from new constructions from both individuals and companies. We collect donations directly from the donors' domicile and register, condition, and repair them if necessary. Products are sold at social prices, depending on the payment capacity of each family. The program is self-sustaining and the surplus is allocated to other housing programs developed by the Sagrad.

Transforming the Low-income Housing Development Paradigm

Centro de Transporte Sustentable de México
Mexico City, Mexico
ctsmexico.org

The city of Aguascalientes is confronting twenty-first century challenges such as sprawl, inefficient transportation, and high fatality and injury rates from traffic accidents. To face this, the Mayor requested our help to transform "Centenario de la Revolución", a low-income housing development for 40,000 residents. We promoted mixed land use policies to create proximity to services, improved conditions for

pedestrians and cyclists, and added connections to high quality public transportation. Our recommendations included more commercial lots, higher density, wider sidewalks, bike lanes, more public spaces, better parking distributions, a pedestrian street, and public transportation connections. By September 2010, the government had accommodated around 70% of the recommendations.





Earthquake Resistant Housing Construction Training Program

Appropriate Infrastructure Development Group (AIDG)

Port-Au-Prince, Haiti

www.aidg.org/confinedmasonry

After the January 12th, 2010 earthquake near Port-Au-Prince, AIDG, in cooperation with the Multidisciplinary Center for Earthquake Engineering out of the University of Buffalo and KPFF consulting engineers, inspected 1500 structures for damage. Inspection teams observed the same construction mistakes in numerous structures. The source of those mistakes was an unskilled workforce that, through apprenticeship, perpetuates building practices that are not appropriate for construction in earthquake zones. AIDG realized that a mass training curriculum for day laborers was needed to address the knowledge gap, and we began training 10,000 masons in confined masonry.



Green Development Zone, People United for Sustainable Housing (PUSH)

Erie County, NY, United States

www.pushbuffalo.org

In 2008, PUSH established a Green Development Zone (GDZ) in Buffalo's West Side, concentrating investments in green affordable housing, geothermal and solar energy, green jobs training, and urban agriculture. To develop the vision for GDZ, PUSH engaged in extensive community planning involving hundreds of neighborhood residents. Work in the GDZ thus far includes the completion of eleven units of green affordable housing, with twenty additional units in development; a NetZero housing renovation, including advanced geothermal and solar systems; paid job training in green construction for forty out-of-school young adults; and a partnership with the Massachusetts Avenue Project, which runs a two-acre urban farm.

COMPETITION FINALISTS

Developing real estate for squatters and tenants of the city of Buenos Aires

Habitat para la Humanidad Argentina
Distrito Federal, Argentina

Kibera Public Space Project

Kounkuey Design Initiative (KDI)
Kenya

Green Development Zone

People United for Sustainable Housing (PUSH)
Erie County, NY, United States

Slum Networking

Himanshu Parikh Consulting Engineers
India

¡Échale a tu casa! (Check your home!)

Ecoblock International
Mexico

Zero Waste, Sustainable Architecture, Renewable Energy

Associação Verdever / Curadores da Terra
São Paulo, Brazil

Sume Materiales (Incorporate Materials)

Fundacion Sagrada Familia
Argentina

Transforming the Low-income Housing Development Paradigm

Centro de Transporte Sustentable de México
Mexico City, Mexico

Bem Morar (Live Well)

Associação Ateliê de Idéias
Espírito Santo, Brazil

Earthquake Resistant Housing Construction Training Program

Appropriate Infrastructure Development Group (AIDG)
Haiti

Safe and Affordable Home Upgrading in Low-income Urban India

micro Home Solutions
India

The winners will be announced April 12. Follow the details of the competition at: www.changemakers.com/sustainableurbanhousing

MOBILIZING THE CITIZENS OF OUR CLIMATE-DISRUPTED PLANET

Heejoo Nichole Lee, ECPA Call for Essays honoree

Climate disruptions¹ are dire. We conspicuously hear, see, and feel immobilizing snowstorms, life-threatening heat waves, and alterations in world maps. But perhaps more threatening is the lack of understanding of the gravity of climate disruption in the public and governments around the world.²

However, recent events suggest an emerging realization of the need for smaller scale interventions that do not wait for action from higher levels.³ In an address at a United Nations Framework Convention on Climate Change (UNFCCC) subsidiary meeting in June 2010, Executive Secretary Yvo de Boer stated, “The political intent to constrain emissions and adapt to climate change needs to be translated into action on the city level. Ultimately, it is cities that will directly face and directly deal with climate change impacts.” (Yvo 2010).

The need for impetus and clarification in sustainable planning

With increasing call for action from all units of aggregation, the dialogue on climate disruption and the need to produce effective responses must translate to urban planning. As we have established that the forms and functions of our built environment are key contributors to the challenges we now confront, we must transform the built environment from a threat into an opportunity for mending. There are two specific impediments to implementing sustainable planning in the Americas that will be discussed here: a lack of public awareness and the elusive nature of the concept and language of sustainability.

The United States lacks comprehensive national legislation or policy to support global initiatives that seek to address climate disruption. Moreover, consumption trends in the United States – including those directly related to the built environment (i.e. buildings and infrastructure) – continue to rise.⁴ The relative lack of conservation and reduction measures indicates deficient responsiveness towards the severity of climate disruption. Such neglect also implies foregone benefits of technological advancements. For instance, although LEED has been a thriving business for the United States Green Building Council and Green Building Certification Institute, investors and developers pursuing better performance buildings with reduced environmental impacts are thwarted by the lack of demand and public recognition.⁵

The gap between this reality and the ideal track on which we *should* be is partly a result of ambiguity associated with the term ‘sustainability,’ both in theory and practice. Grandiose labels such as *green, smart, intelligent, and friendly* have emerged as attachments to our cities, neighborhoods, communities, roads, waste systems, and infrastructure. Yet, public excitement as well as specificities for these terms remain slipshod. The current elusiveness of ‘sustainabil-

ity’ has great consequences, one of which is allowing unqualified works to obtain credit as being sustainable. Moreover, the imprecision permits different disciplines to interpret and justify their own terms of sustainability. In turn, this incongruity hinders fluid exchange and creative synthesis of ideas and solutions. Clearer consensus-based understanding and control of the language and concept can more efficiently mobilize practical, meaningful, and stronger action.

The term ‘sustainability’ embraces accountability for the promise of unrelenting care for the well-being of human occupants and the environment.⁶ ‘Sustainable Development,’ from which we derive our contemporary understanding of Sustainability, was defined only after scrupulous deliberation: *development that meets the needs of the present without compromising the ability of future generations to meet their own needs*⁷ (Brundtland 1987). We must be respectful to this definition and the full scope of the values it espouses.

Achieving sustainability through participatory place-making

Heightened awareness and understanding of the concept of sustainability, which is necessary in order to bring about changes in behavior and perception towards sustainability, can be facilitated through a certain planning approach: participatory place-making. Participatory place-making appreciates the community members surrounding a project site as the experts for the use of that site. It also entails the community’s consistent engagement throughout the process leading up to physical intervention, as well as the lifetime of the space thereon as a *place*.

‘Place’ refers to the intertwining of space and personal context. Spaces transform into places when one identifies some part of his or her

Vehicles, commuter trains, and subways were immobilized by a 2010 blizzard in New York City – the sixth worst storm to ever hit the metropolis. (Image credit: flickr user Michael Dolan)



life with those spaces. Hence place-making deals with factors well beyond mere physical components, and engages true concerns for the values often overlooked in importance: equity, environmental consequences, and resilience against various challenges – including those of climate disruptions.

Participatory place-making galvanizes heightened awareness, continued supervision, and innovative strategies that can confront the challenges of implementation for sustainable cities and communities. Stakeholders sharing knowledge about the causes and conditions of existing problems contribute invaluable insights for envisioning a long-term plan. The community is endowed with a sense of ownership that will help sustain the life of that space. This translates into association with the place on a deeper level, contemplating upon the consequences not only for the immediate users, but also for the environment and successive generations. These values coincide with the definition of sustainable development noted above.

In order to address all implicit aspects of sustainability in terms of the built environment, integrating people who both affect and are affected by their built environment is evermore critical. The core of sustainability planning embraces issues such as reducing energy use and material consumption *in our daily lives*. Likewise, many sustainability agendas are intimately linked to our behavior and lifestyles, as well as the values that guide those patterns. Implementation of the most advanced technologies alone is economically impractical due to the scale of what is necessary to counter the effects of climate disruptions.

The key to undertaking these challenges lies in collective action by all members of society, which will cumulatively lead to an impact of the scale we need. Collective action does not only refer to individual efforts to conserve energy and reduce material consumption; it also refers to the power to mobilize government and to create a vi-

able market for the new technologies and products that support sustainability. For example, participation through place-making can engender greater awareness for the benefits of investing in higher performance buildings or supporting city-wide policies limiting parking lots. On the whole, participatory place-making galvanizes the necessary collective action to meet the unique needs of the community.

Stories of environmental and social sustainability in places

Hunts Point Riverside Park demonstrates successful reclamation of natural environment as well as public space, made possible by community members taking action. Heavy industrial development along the water had denied the community access to the waterfront. This deprivation precipitated environmental and social deterioration of the neighborhood. But a regeneration project intimately engaging community grassroots power flourished under the leadership of two main nonprofit organizations: The Point CDC and Sustainable South Bronx. Community clean-up sessions, followed by other community-initiated programs and events caught the attention of public officials, resulting in the appropriation of funds for capital improvements. Community commitment was successfully matched with various government agendas,⁸ leading to a powerful convergence of forces that expanded the reclamation efforts to upper regions of the Bronx River. There are numerous ancillary effects of this success: competent community residents that take charge of operating and maintaining the park, burgeoning expansion of green-space networks to increase pedestrian travel, and most importantly, an empowered community that feels capable and responsible for the future of their surrounding environment.

Programs under the United Nations Institute of Training and Research (UNITAR) provide another set of relevant case studies. In collaboration with other institutions,

ECPA CALL FOR ESSAYS

“Mobilizing the Citizens of Our Climate-Disrupted Planet,” by Nicole Heejoo Lee and “Engaging the Spectrum of Development Barriers,” by Andreea Ioana Pantor are the two essays selected from the submissions received in response to the ECPA call for essays. APA solicited reflective essays from emerging professionals in response to the following question:

“What are the largest barriers to implementing sustainable, climate-proof, energy efficient development across the Americas and the Caribbean, and how might the planning profession best respond to these challenges?”

These exemplary essays reveal a keen understanding of the urban planning issues and context across the Americas and the Caribbean, drawing upon case studies, best practices, and innovative planning techniques and processes.

The call was open to students and new professionals (members less than 5 years out of school) who are part of the ECPA Professional and Academic Urban Planning Network. Nicole and Andreea received a complimentary registration to the National Planning Conference and a stipend of \$500 for their work. They will receive recognition during an ECPA session at the conference.

Electronic versions of the two selected essays - as well as excerpts from additional entries - can be found at: www.ecpaplanning.org/essays

Left: Mayor Mike Bloomberg, Parks Commissioner Adrian Benepe, Sustainable South Bronx Executive Director Majora Carter, and Bronx River Alliance Executive Director Linda Cox together at the groundbreaking for Hunts Point Riverside Park in 2004. (Image courtesy of NYC Parks & Recreation) Right: The river has become a revived environmental asset for the community. (Image courtesy of Majora Carter)



UNITAR has striven to cultivate local community-led initiatives to prepare for adverse effects of climate disruption (UNITAR 2007). For example, an effort to increase the adaptive capacity of rice farmers was conducted through training sessions engaging the farmers, incorporating their inputs to draft appropriate strategies. This led to sharing experience-based creative knowledge and skills amongst individual farmers. Vocalizing hidden expertise and passion helped to amass otherwise scattered assets into a tangible and identifiable approach, which would be continually improved upon by the actual stakeholders – the farmers.

The importance of an inclusive planning approach is also highlighted by the blighted fate of cities where participation was neglected. The high-profile Songdo New City of South Korea, although publicized as the most sustainable city on Earth by its developers, has failed to attract residents. Despite various government incentives and deregulations to lure people into this city built from scratch on reclaimed wetland, Songdo desperately struggles to fill high-technology residential units and office spaces – suffering from grave financial difficulties (Kim 2010). The planning of Songdo demonstrates the shortfall of top-down planning. For example, driven by the ambition to ‘green’ the city at any cost, the city created bicycle lanes. Although theoretically a ‘green’ move, the residents complained and criticized the installation of bike lanes. Largely due to haphazard planning and implementation, the bicycle lanes are hardly used, while worsening traffic on the road and consequently negatively affecting the air quality from the bike lane induced traffic jams. The residents were even dismissing bicycle lanes as “going against low carbon green growth” (Kim 2009). In this particular case, adequate involvement of the community members could have prevented such environmental degradation and inconvenience.



Promoted as the most sustainable city in the world, Songdo New City in South Korea has had difficulty attracting new residents and commercial office tenants (Image credit: Wikimedia Commons user Airplane360).

Another success case study comes from the favelas – informal settlements – of Rio de Janeiro, where community efforts have produced opportunities and assets for both residents and the environment. Through a program known as the “Paid Self-Help Reforestation Project,”⁹ the favela community members provided the functional engine to bring about active solutions to the city’s environmental threats. Adversities from human-induced deforestation presented grave perils to favela residents who have limited choice in settlement location other than those specifically prone to environmental risks such as landslides, collapsed river banks, increased runoff, and flooding. The continuous lack of municipal services, formal planning structures, and accessible economic activities inhibited these communities from effectively weaving into the urban system (MCP and BIMA 1994). But the Paid Self-Help Reforestation Project, recognizing potential opportunity in overlapping interests,¹⁰ helped organize resident associations in the favelas. Residents, led by their elected project manager, were trained and incorporated into reforestation efforts around their own neighborhoods. A working document prepared for the United Nations Development Programme recounts measured success in reduced environmental hazards and improved social conditions.¹¹ The successes were especially noteworthy because of the newly realized capacity embedded in these often-marginalized communities. As this case demonstrates, because environmental problems can be so omnipresent and capital-

intensive for the government to take practical action alone, compensated collective efforts from the underprivileged communities can be an economical solution to dealing with fundamental needs in living environments.

Best practices

By considering the contexts of different scales and times along with these case studies, we can deduce common lessons that can provide the basis for best practices:

1. Engage community members in the planning process.
2. Organize and articulate the input from community members into a tangible output: skills earned from training and practice as planners - such as referencing historical evidence and theories, analyzing data to substantiate arguments, and effectively communicating integrated ideas - should be used to construct the grounds on which reiterative yet productive exchange of different perspectives may occur.
3. Pursue interdisciplinary practice: the planning discipline and profession should promote its interdisciplinary nature in which engineering, ecology, economics, sociology, and policy can inform the processes of discovering, understanding, and decision-making.



A pilot project in Ghana engaged rural farmers and herders in working with policy makers, researchers, and NGOs to understand local perceptions, identify options, and create channels for communication. Expected outcomes included heightened performance in adaptation specific to adverse effects of climate disruptions. (Images courtesy of Food Security and Adaptation to Climate Change in the Afram Plains of Ghana Project)

4. Focus on the process: despite the normative framework of planning that heavily relies on evaluation of the final outcomes, planning that holds significance in its method- and process- driven nature will enable long-term visions delivered by creative combinations of stakeholders.

Reflections on the future of sustainable planning

L.H. Schneekloth and R.G. Shibley chronicle their place-making experience in their book *Placemaking the Art and Practice of Building Communities*. Through the process of *Confirmation – Interrogation – Framing Action*, the authors involved themselves as facilitators and contributors in place-making projects. *Confirmation* – “fully appreciating the context of the project” – is conducted through workshops, meetings, and interviews that gather all interested parties. Observations are carefully recorded and disseminated, encouraging feedback from the community. *Interrogation*, or the “process of inquiry designed to uncover the basic values and assumptions forming human institutions and actions,” then questions and problematizes the purpose and history of the place as well as activities that make up the place (Schneekloth and Shibley 1995). Substantiated by these processes of stimulating deeper examination of values and self-reflection, as well as the process of building trust and competence in one another, the *Framing Action* phase helps to navigate and translate ideas into collaborative plan for physical intervention. This process impregnates inertial force to cultivate organized action to collectively maintain, utilize, and foster the space.

Planners must encourage heightened awareness amongst community members, who are often indifferent about issues over energy supply sources and generation plants unless they are conspicuously victimized by environmental injustice or hazards. Because certain issues, such as those regarding physical appearance or the use of particular spaces are more likely to attract and instigate community concern and action than intangible issues such as energy consumption patterns,¹² place-making gives firm ground on which the community can produce concrete action. The planner’s role is to ensure that communities are brought to attention and get involved in the process of finding solutions, especially for those problems whose threats are often perceived as remote and irrelevant. Problems stemming from climate disruptions are representatives of such. Breakthroughs

in science and technological advancements in engineering await equal breach in the traditional perception of our surrounding environments and our relationships to them. Participatory place-making, helping to realize the potential contributions from the local level, will deliver effective measures to respond to climate disruptions in the most economic way: weaving together long-term commitments and unbounded capabilities of individuals and communities.

Notes

1. In September, 2009, White House science and technology adviser John Holdren encouraged use of the phrase ‘global climate disruption’. As opposed to what is most often referred to as climate change, the term climate disruption acknowledges that the climate of our planet earth is a natural phenomenon. What we should be aware of and heed are the effects that exceed natural ranges of change – hence termed ‘climate disruption’.
2. Although the largest convention of heads-of-state came together in Copenhagen in 2009 for the purpose of drafting binding agreements to curb human-induced climate disruption, politics prevailed over the global environmental stakes, preventing effective emission reduction goals. The most recent UNFCCC Conference of Parties (Cancun, December 2010) has yet to arrive at the necessary conversion of emission reduction targets to reduction commitments (AWG-KP 2010).
3. This recognition is newly reflected in the most recent UNFCCC Conference of Parties in Cancun 2010, where – for the first time in this leading international conversation on climate disruption – discussions about city-level concerns were broached: “[...] recognizes the need to engage a broad range of stakeholders at global, regional, national and local levels, be they government, including subnational and local government, private business or civil society” (UNFCCC 2010).
4. Total public and private construction in the U.S. saw a 45.2 percent increase between 1975 and 2000 (Rogich et al. 2008).
5. Forty-eight percent of real estate executives participating in Green Building Market Barometer survey identified the Lack of awareness of the benefits of Green construction as “an extremely or very significant obstacle to Green construction” (Turner Construction 2008).
6. The true holistic concept of sustainability has wider temporal and spatial scope. Temporally, future generations are brought into the equation; spatially, not only those immediate spaces of intervention, but those affected off-site are also taken into account. For example, New York City’s waste landfill lies outside the jurisdictional boundaries of New York City.
7. The attributes of ‘sustainability’ were settled at the end a four-year collaboration work amongst 23 commission members representing 22 countries. In addition, eleven expert-special-advisors and three separate advisory panels comprising 36 top experts from 24 countries were also involved in this undertaking by the World Commission on Environment and Development.
8. Capital improvements to this area were identified in documents such as the Comprehensive Waterfront Plan, the 2003 Hunts Point Vision Plan, PlaNYC, and the 2007 Citywide Sustainable Development Guide.
9. Facilitated and documented by the Mega Cities Project and the Brazilian Institute of Municipal Administration.
10. Objectives for the project included reduced public expenditure on engineering works, limited expansion of favelas onto risk areas, restored forest cover, employment, and active local community engagement in the fight for the preservation of the environment (MCP and BIMA 1994).
11. Environmental improvements included reduced erosion and landslides, soil recuperation, regenerated water springs, revived flora and fauna, and micro-climatic change. Social benefits included diversified diets for favela residents, recreational spaces, job creation for economically depressed favelas, social equity by employment to various age groups for both sexes, pride in accomplishment and community ownership, additional technical information and skills, better understanding and bonds to the environment, raised



Place-making involves gathering of members of the community to exchange perceptions, build different options, and frame action for progress. (Image courtesy of Project for Public Spaces)

political consciousness of favela residents, and increased sense of empowerment to take action (MCP and BIMA 1994).

12. At a full-board meeting of a Manhattan Community Board in February 2011, the author observed that among more than 20 public announcements, one promoting efforts against the expansion of natural gas energy services received effectively no support or attention despite the speaker’s preparation with flyers and evidential newspaper records of natural gas related explosions.

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Running her life between South Korea and the US, Nicole Lee’s exposure to diverse environments has led to a natural affinity for exploring how different people value and interact with their immediate environments. Trained in environmental engineering and now studying urban planning, she strives to be a synthesizer for a better world that harmonizes people and nature.

A SPECTRUM OF DEVELOPMENT BARRIERS + PLANNING RESPONSES

Andreea Ioana Pantor, ECPA Call for Essays honoree

Engaging Governance, Landscape, Infrastructure, Housing, and the Public for Sustainable Development in the Americas and the Caribbean

'Development' represents the process of engaging and/or carving into the landscape to generate systems and structures through which people can live, work, and recreate. Optimal development is context-specific and durable; it is sensitive to regional, national, and local needs while considering global trends and best practices. It looks beyond the present to envision, and provide for, the needs of future generations. Such development can be achieved through sustainable, climate-proof, and energy efficient strategies. This triad is essential in addressing the "urgent and intertwined challenges of energy security and climate change" currently facing the Americas and the Caribbean.¹

Summarizing key barriers and the role of planning

The "urgent challenges," or barriers, to which U.S. President Obama alludes, exist in the following five sectors, which form the basis of this essay: **(1) governance, (2) landscape and land use health, (3) infrastructure quality, (4) housing fabric, and (5) public engagement.** Planners are uniquely equipped to engage deficiencies within these sectors by customizing planning techniques. Through creativity, flexibility, and scientific approaches, planners can generate the frameworks, dialogues, and deliverables to leverage energy efficiency and climate adaptation.²

Identifying key geographic regions

The complexity and expanse of the Americas and the Caribbean mega-region pose specific challenges to sustainable, climate-proof, energy efficient development. In addition to existing governmental structures and policies, recent natural disasters such as flooding, mudslides, landslides, water contamination, and wildfires, have revealed inadequacies in the five aforementioned sectors at regional, national, and local

scales. In January 2011, the Região Serrana region of Brazil, and the Bakersfield and San Luis Obispo areas of Southern California, among other similarly-situated regions, experienced unprecedented rainfall. These climate-induced conditions led to property damage, human displacement, and death. In the Brazilian cities of Petrópolis and Nova Friburgo, 600 deaths resulted from swollen rivers and cascades of mud.³

The Americas and the Caribbean, however, do not present challenges alone. This mega-region also boasts promising development strategies. Costa Rica, for example, has crafted a national focus on environmental conservation, eco-tourism, and renewable energy.⁴ Further north, Canada has publicized national reforms that directly address sustainable development and government accountability.⁵ Additional potential energy, however, must be tapped within these regions in order to broaden sustainable, climate-proof, energy-efficient development.

Facilitating sustainable, climate-proof, energy-efficient development

Existing deficits within the sectors of **(1) governance, (2) landscape and land use health, (3) infrastructure quality, (4) housing fabric, and (5) public engagement** form the largest barriers to sustainable, climate-proof, energy efficient development across the Americas and the Caribbean. Reforms within each sector can streamline regional, national, and local strategies to emphasize energy security and climate adaptation and, consequently, facilitate an improved quality of life for diverse local populations.

1. Governance

'Governance' encompasses the regional, national, and local mechanisms that create and implement actions affecting land,

people, and everything in between. These bodies must respond to and support the needs of diverse local populations, while maintaining intra-governmental dialogue. Failure to do so can cripple opportunities for sustainable development. In Mexico, for example, economic and social sustainability are faltering in the context of water management decentralization. Although power is being redistributed to regional entities, they currently lack the planning, financial, and management capacities to coordinate water resources, and account for the needs of end users.⁶ Within the housing sector, Jamaica has replaced national policies of direct construction and subsidization with the private market. As a result, only 2% of the lowest-income individuals are able to access formal housing.⁷

Such countries can benefit from improved connections among regional, national, and local bodies, including partnerships with entities like the ECPA, as well as greater transparency with respect to local populations. Such dynamics can help sustain the creation, implementation, financing, and evaluation of planning initiatives that foster water allocation, housing access, and flood control, among other sustainable objectives. In Canada, for example, the national government is implementing a Federal Sustainable Development Strategy (FSDS) consisting of integrated government actions, improved planning and reporting systems, and effective monitoring tools. This framework can help translate high-level policies into ground-level actions, while retaining accountability among all levels of governance.⁸ There also exist opportunities at the local level, as in the "Chicago Action Climate Plan." This plan integrates the efforts of planning, transportation, and water management professionals to holistically mitigate greenhouse gas emissions and adapt to climate change. As of October 2010, more than 32,000 square feet of green roof space,

and 19,500 household energy efficiency retrofits have been installed.⁹ Collectively, these initiatives highlight the valuable role of planning within the governance sector.

2. Landscape & Land Use Health

'Landscape and land use health' refers to the goal of maintaining natural and productive site conditions within varied development schemes. Countries such as Costa Rica foster sustainable development through protected national parks and nature preserves, which amount to 25% of the nation's total landscape. However, environmental issues such as deforestation, soil erosion (as in Região Serrana) and coastal marine pollution persist. Land clearing associated with cattle ranching and agriculture disturbs the process of carbon sequestration which, in turn, impedes global warming mitigation. Brazil and Chile, which contain the largest forests in Latin America, face the additional challenge of ineffective fire prevention. Such deficits in landscape and land use health continue to compromise the goal of sustainability in these regions.¹⁰

The planning process can mitigate existing and potential climate impacts through a combination of visioning and plan-making, in concert with policies that support sustainable development and public investment in climate-sensitive and energy-efficient strategies. Costa Rica's Agenda 21 Program represents one such example. Since 1999, the Costa Rican government has combined national policies and "local multi-stakeholder" participation in the ACOSA Conservation Area. Complementing the preservation zones within ACOSA, Agenda 21 seeks to address development schemes that have compromised natural resources and fostered economic inequality.¹¹

Planners, for example, can assist in crafting effective solutions for inhabitants like those of Região Serrana. Preliminary steps would include assessing flood impacts through site evaluations, and the documentation of personal accounts. Planners would then assist in formulating flood management policies such as increasing base elevation requirements, and formalizing Flood Insurance Rate Maps.¹² Additionally, coastal ar-

reas, which are uniquely vulnerable to the impact of intense precipitation within short periods of time, would benefit from policies which balance waterfront development, coastal reinforcement (e.g., dune restoration), and a long-term shift in development to less sensitive sites.

Through inter-governmental alliances, planners can also facilitate forest preservation throughout South America. In January 2010, the Inter-American Development Bank approved a \$10 million loan to Chile's National Forestry Agency (CONAF) in order to preserve forest resources, and to develop woodlands ecosystems in a sustainable manner. Such efforts reflect the benefits of engaging land use and landscape health challenges holistically.¹³

3. Infrastructure Quality

'Infrastructure quality' pertains to the ability of systems, which are superimposed or carved into the landscape (e.g., transportation, water, energy, agriculture), to promote optimal access and use of shared resources. Overall, Latin America is suffering from reduced investment in transportation, water, and energy infrastructure. Within the past thirty years, national spending on the construction and maintenance of roads, bridges, railways, airports, and ports has declined by 50%; it now represents only 2% of GDPs in countries such as Bolivia and Peru. This disinvestment has limited regional and international business transactions, and compromised local access to clean water for approximately 58 million inhabitants.¹⁴

Furthermore, climate change impacts such as flooding, mudslides, and landslides, can compromise both existing and new infrastructure. According to the Economic Commission for Latin America and the Caribbean (ECLAC), rural populations in tropical regions "are particularly vulnerable to the effects of climate change on agriculture." Countries such as Haiti, Guatemala, and Venezuela are currently experiencing food shortages due the effect of strong storm cycles and disease epidemics spread through infrastructure networks.¹⁵

"Green infrastructure" represents an effective response to vulnerable infrastructure throughout the Americas and the Caribbean. Planners can assist in incorporating elements such as parks and wetlands in flood-prone areas in order to form green infrastructure networks. Integrating this type of development within regional, national,

Rail infrastructure in Medellín, Colombia. (Image credit: Wikimedia Commons user Sajor)



and local plans can address storm management needs and provide structural buffers for transportation, water, energy, and agriculture networks.¹⁶

The “ECPA Caribbean Initiative” reflects a renewed focus on energy infrastructure in countries such as the Dominican Republic and Haiti. Between 2010 and 2013, the U.S. Department of State and the Organization of American States will promote sustainable energy policies and programs that assist governments in executing renewable energy projects.¹⁷ The “Lighting the Americas” initiative, involving Brazil, Peru, and Chile, seeks to provide electricity for 34 million families in Latin America at a cost of US\$1500–\$2000 per household. Such efforts reflect the importance of linking targeted policies for infrastructure improvement with intergovernmental cooperation and financing.¹⁸

4. Housing Fabric

‘Housing fabric’ is characterized by the age, size, configuration, materials, density, and location of housing units—a key component of sustainable development. In Rio de Janeiro, approximately 20% of the population resides in housing developments termed ‘favelas.’ These informal enclaves developed due to the absence of affordable urban housing for rural migrants. Throughout the Americas, favelas are associated with unregulated construction, vulnerable hillside locations, and extreme poverty. Rocinha, the largest favela in Rio de Janeiro, houses approximately 250,000 inhabitants.¹⁹

Through their multi-disciplinary perspective and facility with community engage-

People can more effectively live, work, and recreate when they can access food and shelter and navigate a healthy landscape. Such access can be facilitated by ‘public engagement’—the process by which governmental bodies encourage and sustain dialogue amongst diverse local populations.

ment, planners can assist in customizing the housing needs of disenfranchised populations, while preserving their collective identity. For example, planners can address structural deficits by creating regional, national, and local mechanisms that prioritize energy-efficient principles, as extensions of “smart growth.”²⁰ “Smart” housing units would incorporate high-performance design, materials, and construction practices, which can reduce energy consumption and greenhouse gas emissions.²¹

Housing proposals recently submitted to the Sustainable Urban Housing: Collaborating for Livable and Inclusive Cities competition encompass both structural and socioeconomic facets. For example, “Echale a Tu Casa” blends economic development and physical planning in order to foster sustainable communities in Mexico and abroad.²² “PUSH” combines affordable housing, geo-thermal and solar energy, green jobs training, and urban agriculture.²³ While valuable on their own, such grassroots projects should be engaged in concert with government-sanctioned initiatives in order to generate the broadest impact. Developed in 1960, “Cidade de Deus” represents a state-sanctioned neighborhood in Rio de Janeiro, based on government policies to dissolve favelas within the urban center,

and relocate inhabitants to surrounding suburbs.²⁴ “Favela Bairro” represents a more contemporary, and culturally-sensitive approach to housing revitalization. By melding government entities and community members through grassroots organizations, this initiative has sought to improve infrastructure, connectivity, and programming within existing favelas.²⁵

5. Public Engagement

People can more effectively live, work, and recreate when they can access food and shelter and navigate a healthy landscape. Such access can be facilitated by ‘public engagement’—the process by which governmental bodies encourage and sustain dialogue amongst diverse local populations. When firmly rooted at the local level, and buttressed by regional, national, and even global mechanisms, public engagement can foster a sense of equality through which inhabitants feel invested in a sustainable society.

Countries such as Belize, however, have implemented an autocratic approach to planning, all but eliminating public participation. Between 1996 and 1997, planning agencies engaged in strategies of containment and exclusion at “public meetings” concerning fishing restrictions. Although local fishermen faced economic turmoil due to broad restrictions within conservation zones, centralized government and planning agencies chose to demarcate such zones unilaterally.²⁶

In cases of flawed public engagement, community visioning can help planners engage multiple stakeholders.²⁷ Charrettes and town hall meetings represent visioning tools which can help identify opportunities and priorities, as well as elucidate connections between the barriers to sustainable development and the unifying goals of energy efficiency and climate sensitivity. Applying such tools within a democratic civic process can facilitate dialogue between local populations and centralized mechanisms across the Americas and the Caribbean.²⁸

*A favela in Rio de Janeiro, Brazil.
(Image credit: John C. Reinhardt)*



In order to streamline public involvement, governing bodies must also improve local populations' access to critical information and resources. In catastrophic circumstances, officials must ensure that warning messages reach inhabitants through reliable communications infrastructure. With respect to local initiatives, officials can convey project milestones through electronic media, and encourage resident feedback, as in the "Chicago Climate Action Plan." Regional, national, and local bodies must implement such strategies in order to elevate public engagement across the Americas and the Caribbean.

ADDITIONAL BARRIERS

Many barriers to sustainable climate-proof, energy efficient development do not fall within discrete categories. For example, Peru requires improvements in both labor and environmental sectors, including informal markets, and natural resources.²⁹ According to Ricardo Hausmann, Director of the Center for International Development at Harvard University, greater economic diversity is critical to national health and sustainable development throughout Latin America. For example, the economy of Trinidad and Tobago, which is heavily rooted in the energy sector, must be further diversified to emphasize "nearby goods." Such intersections among social, economic, and environmental sectors highlight the need to engage structured planning processes.³⁰

CONCLUSION

This essay contends that recent natural disasters, existing governmental structures, and ongoing policies throughout the Americas and the Caribbean have illuminated problems in **(1) governance, (2) landscape and land use health, (3) infrastructure quality, (4) housing fabric, and (5) public engagement.** In order to facilitate sustainable, climate-proof, energy efficient development, planners must address each barrier. Planners can provide effective solutions by applying their multidisciplinary, long-range, and community engagement perspectives— skills which can unify differing regional, national, and local interests. The key is to blend customized planning practices with governance mechanisms in order to assist diverse communities in understanding and reducing their vulnerabilities to climate change. With energy efficiency and climate sensitivity as guiding principles, planners can facilitate truly sustainable development across the Americas and the Caribbean.

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MERCÚRIO AND THE TOWER OF DAVID

Frank Zimmerman, ECPA Program Intern

Cities must provide affordable sustainable housing for the working poor. While this may at first seem primarily a social and economic concern, access to energy-efficient urban housing is critical to our successful energy and climate futures.

Two years ago, a young NGO volunteer named Aldo brought a group of students and me to meet the leader of a building that had become a brazen symbol for São Paulo's working poor. The Mercúrio building (and its more famous empty neighbor São Vito) sat across a catchment basin from the city's popular Municipal Market. The tower's green faded exterior walls held together a jagged mix that included the occasionally intact window. Graffiti, spanning almost thirty years, tagged every floor of the twenty-six story structure. Only the drying laundry hung from the empty window frames clued outsiders that squatters still resided in the long-condemned building.

At the time of our visit, Mercúrio housed almost 150 residents. Varying from elderly couples to young children, the residents had been there illegally as city officials remained undecided on the structure's future. Originally, in the 1960s, the building was occupied by rent-paying middle-income laborers. As São Paulo's population exploded in the later part of the twentieth century, the city decentralized, the renters moved, and the bankrupted building was sold to the city. Following a period of neglect a mix of families and individuals from a wide range of circumstances moved into the vacant building. They set up homes and rented out adjacent apartments while the local government debated whether to remodel the building for low income housing or bulldoze the structure to expand a nearby park.

The Mercúrio lobby was lit by the gaping hole where the front entrance used to hang. All artificial light in the building's public spaces had been recently destroyed by city workers attempting to deter squatters. Given the lack of stairwell light, residents informed us that we were to use

the building's last operational elevator. Using the 1950s-era, steel-caged elevator to move between floors, a journey taken multiple times a day by the building's residents, was a rattling experience. It was only one of the building's many extreme aspects that the remaining squatters were willing to endure in order to remain in the city center.

The Mercúrio was all at once a historic relic, a home, and a symbol of resistance to exclusion in an ever-gentrifying urban arena. On the sixth floor, surrounded by doors marked be faded "X"s and city padlocks, we were pointed to the entrance of our guide's home. He explained that constant harassment from city officials and transients had driven every other inhabitant from his floor. Apartments left unattended, even for a short time, were at risk to be ransacked or bolted closed. A few floors higher we found three girls playing in a dark hallway just beyond the threshold of their parents' residence. In spite of a few broken lights, the floor where the girls had resided for most of their living memory was noticeably better cared for than the rest of the building. The roof contained an overgrown performance space where Os Gêmeos, two of Brazil's most famous graffiti artists, had left their mark among countless other tags.

With the constant threat of eviction looming, I asked a few of the residents where

From not only a social and economic perspective, but also from an energy and climate perspective, city officials must to do more to slow, and hopefully reverse, the high cost of urban housing for the working poor.

they planned to go if they were forced to move. I was curious whether anyone had

identified other options, hoping to receive government compensation following their removal. For our guides, affordable options did not exist in the formal sector. Their future was split between homelessness or moving to a favela at the city's periphery (where they would likely have to relinquish their current jobs). From what I could tell, it was a reality on which they actively attempted to not dwell.

I thought of the Mercúrio recently when the New York Times published an article on the squatters residing in an unfinished, 45 story structure in downtown Caracas, Venezuela.¹ The skyscraper, known as the "Tower of David," houses 2,500 people who have come because of the high cost of rent and extreme wage disparity within the city's downtown. Much like most of Mercúrio's residents, many squatters chose to live there because their city offered few (if any) affordable alternatives. Like many people across the Americas, they recognized the value of urban life, and their habitation of unsafe and unfinished structures was their only way to have it.

From not only a social and economic perspective, but also from an energy and climate perspective, city officials must to do more to slow, and hopefully reverse, the high cost of urban housing for the working poor. If nations are serious about reducing energy waste without sacrificing economic productivity, policy makers must create avenues for willing citizens, rich and poor, to move into dense urban areas. Simply put: urban residents consume much less energy than their suburban counterparts. A study from the Urban Land Institute found that residential units in more compact counties in the U.S., on average, used 20 percent less energy on heating and cooling than units in more sprawling counties.² It is also estimated that dense neighborhoods such as those advocated by the U.S. Green Building Council could reduce home energy use by

up to 50 percent.³ When accounting for the reduction in vehicle miles traveled (or VMT, which makes up 30 percent of the U.S.'s total energy consumption⁴) by new urban residents, the energy savings of cities grow exponentially. When citizens inhabit areas where they rely on active or public transit to meet their daily needs, the resultant reduction in car traffic limits energy waste.

for many working Americans (especially when the median value of an occupied housing unit in New York City was only \$148,700 USD in 2000.⁸) While removing the height cap on city buildings may reduce the cost of urban housing, there is still much that cities, states, and national governments must do to support middle and low income earners in dense urban environments.

would be for national governments to mandate that all new developments in dense areas include a percentage of affordable apartments and that regions remove zoning ordinances that currently prevent people from renting out unused parts of their homes.⁹ These targeted solutions could specifically increase the affordable housing stock in growing cities without burdening city budgets.

Two days after leaving the Mercúrio building in February 2009 our group received this message from our guide, Aldo:

"Unfortunately, today, around 5 O'clock, 200 military police, alongside with city hall officials stormed the Mercurio Building and kicked out around 150 people who lived there. They are all homeless now. I'm sure your students were the last visitors they had..."

While it is important for developed nations to deter squatters in order to protect property rights and promote public safety, cities should step up to provide a range of housing choices for residents in efficient urban environments. Beyond being a social and economic issue, our nations' climate and energy futures depend on it.

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The environment stands to benefit when citizens migrate toward dense, formal communities. In areas where less energy is wasted, less polluting generators have to operate in order to meet demand. Individuals in urban areas consume less water, develop less land, and produce less solid waste.

The environment stands to benefit when citizens migrate toward dense, formal communities. In areas where less energy is wasted, less polluting generators have to operate in order to meet demand. Individuals in urban areas consume less water, develop less land, and produce less solid waste.⁵ In addition, a reduction in VMT in dense urban areas reduces fossil fuel emissions. A study conducted at the Center for Clean Air Policy estimated that a 10 percent reduction in VMT could reduce personal vehicle CO₂ emissions 33 percent by the year 2030 (equivalent to the closing of thirty-five coal plants.⁶) The environmental and energy benefits that come with housing citizens in dense urban environments are exceedingly tangible, and governments must make them accessible to a greater portion of their populations.

The first way to make urban housing affordable is to increase its supply. In contrast to Jane Jacob's ideal building height, a three to five story "walk-up" native to her home neighborhood Greenwich Village in New York City, Edward Glaeser suggests that more major urban centers should allow buildings to grow as tall as the market demands. Glaeser (author of *The Triumph of the City* and professor of economics at Harvard University) argues that towers will have the flexibility to stretch in high demand areas and drastically increase the supply of housing. This influx in supply will bring down the cost of housing in urban areas that he believes is often inflated by an exceptionally high demand. In a recent article, Glaeser points out that while a 1,200 square foot apartment in forty story building costs around US\$500,000 to construct, that same apartment could cost the purchaser over US\$1 million in the Manhattan real estate market.⁷ While this is an enormous price disparity, \$500,000 USD is still unaffordable

Housing support for middle and low-income earners generally comes in the form of either rental assistance programs or affordable housing construction. Many of these support systems often operate well below demand levels because of budget limitations. Yet, there are revenue generators that have still not gained wide spread use. One solution to offset the cost of affordable housing is "value capture," practices by which public coffers financially benefit from land value appreciations, separate from the actions of private land owners, that follow government improvement projects. For example, a local government can purchase a parcel of land, increase the zoning density, and then sell the property for a net profit. Other forms involve partnerships between private owners and city officials in which agreements ensure that coffers accrue the financial windfall from increasing land values that are directly related to transportation improvements and other infrastructural investments. Using only a portion of the gains garnered from value capture would dramatically benefit affordable housing budgets.

Other solutions for adding affordable housing to walkable urban areas, as suggested by Patrick Doherty and Christopher Leinberger,



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SUSTAINABLE CITIES ARE ECONOMIC ENGINES

Brett Roeth, ECPA Program Intern

Planners are uniquely positioned to implement the vision for a “green” economy President Obama has outlined. Cities across the globe – from Barcelona to Curitiba to Seattle – have demonstrated the economic power of sustainable urban development. By creating walkable neighborhoods networked by energy-efficient infrastructure, planners can create environments that encourage innovation and spur employment.

President Obama’s 2011 State of the Union address on January 25 was naturally focused on economic growth. And while he skirted the specific phrase “climate change,” his remarks demonstrated that his Administration has set a vision to leverage sustainable technology and renewable energy as the backbone of the American economy in the twenty-first century. What was not immediately apparent in his speech, however, was the fact that cities – and those who plan and design them – will play a crucial role in this new economy. As we transition from a consumption-based, carbon-intensive economy to one built upon sustainable production, energy independence, and resource conservation, planners are uniquely positioned to spur economic growth by planning, designing, and building sustainable cities.

Cities have always been centers of culture, commerce, and innovation. At the recent “Global Metro Summit 2010: Delivering the Next Economy,” Bruce Katz, Vice President and Director of the Metropolitan Policy Program at the Brookings institution emphasized the importance of metropolises in the new American economy. “Our major metros

already generate more than three-quarters of our gross domestic product...the next economy will be largely metropolitan, in form and function,” he stated. Katz highlighted the top “100 metropolitan areas that after decades of growth take up only twelve percent of our land mass, but harbor two-thirds of our population and generate seventy-five percent of our gross domestic product.”¹

Unfortunately, America’s entry into this new global economy has been hindered by decades of federal policies that incentivized exurban sprawl, low-density development, and fossil fuel dependence. These policies have bankrupted state and municipal governments and have left many of our cities in various states of disrepair. According to research by Brookings, nearly all of the top thirty urban economic centers are located in Asia and Latin America, and nearly all of the thirty worst performers are in Europe and the United States.²

Other nations including Brazil, Germany, Spain, India, and China, have realized the impressive economic potential of renewable energy and have made investments in new

infrastructure and technology. These investments have reduced carbon emissions, created jobs, and positioned these countries to capitalize on the growing global demand for renewable energy. China – as a result of significant government investments in 2008 and 2009 – has become the world’s foremost producer of solar panels and the second-largest producer of wind turbines, a fact that President Obama referenced in his address. And in Germany, “feed-in tariffs” that regulate carbon emissions have germinated a \$30-billion renewable energy industry supporting 300,000 jobs in the span of a few years.³

While the American economy – and American cities – may have fallen behind other nations, success stories from cities across the globe provide proven examples of how investment in sustainable infrastructure and renewable energy yield economic growth. For example, Torino-based car manufacturer Fiat has somewhat recovered from tremendous losses in recent decades by producing the Fiat 500, which has the lowest carbon emissions of any car in its class. Additionally, many Fiat suppliers have converted to the “environmental services” industry, producing wind turbines and recycling bins or converting their factories to rubber recycling facilities.⁴

Urban cores present ample opportunities for economic growth through renovations, retrofits, and brownfield development. The 22@Barcelona “innovation district” exemplifies these possibilities. As of December 2009, this 200-hectare [495-acre/.77 square-mile] former industrial site was host to over 1,500 businesses employing 44,600 workers.⁵ Furthermore, in spite of the global economic recession, businesses in this district grew 5.4 percent between 2008 and 2009. Policies and investments like these have brought European cities back from the brink of economic ruin that now threatens numerous cities in the American “Rust Belt.”⁶

Agbar Tower marks the entrance to the 22@Barcelona innovation district. (Image credit: Wikimedia Commons user Miguel Carminati)



Urban planning methods that encourage low-carbon growth have benefitted Latin American cities as well. While Curitiba, Brazil experienced a three-fold increase in population from 1970 through 2008, ecological urban planning techniques increased per capita green space from 1 m² to 50m² during the same period.⁷ Curitiba also enjoys the highest public transportation usage – nearly

Some American metropolitan cores have begun to capitalize on the opportunities of the renewable energy sector. Seattle-Puget Sound has developed a “metropolitan business plan” that targets the “building energy efficiency” industry, which already employs nearly 10,000 persons.¹³ This burgeoning industry promoted per capita income growth faster than the nation average over the last

investment in, a system of forty-three miles of light rail and eighty-eight miles of heavy rail, with over sixty stops around which new development has clustered.¹⁷

President Obama has called for action from federal policymakers and urban planners, at a moment in time when urban development and infrastructure investment can spur economic growth in a way that we have not seen since the development of the highway system. America’s twenty-first century economy must be centered around sustainable cities that are connected by reliable, efficient infrastructure and powered by carbonless, renewable energy. While some in the planning profession have recognized this for decades, it seems as though our political leaders are beginning to recognize this as well. Americans – specifically planners, architects, engineers, and other environmental design professionals – have the knowledge and skills to rise to the President’s challenge and lead the transformation of our economy by building thriving cities.

Notes

1. Bruce Katz, “Delivering the Next Economy” (presented at the Global Metro Summit, Chicago, IL, December 7-8, 2010). Accessed January 27, 2011, http://www.brookings.edu/~media/Files/events/2010/1208_metro_summit/1208_metro_summit_katz.pdf
2. *Ibid*
3. Dr. Josef Ackerman, “Keynote Address” (presented at the Global Metro Summit, Chicago, IL, December 7-8, 2010). Accessed January 27, 2011, http://www.brookings.edu/~media/Files/events/2010/1208_metro_summit/1208_metro_summit_ackermann.pdf
4. Ricky Burdett, Andrea Colantonio, Philipp Rode, Myfanwy Talyor, and Greg Clark, “Policy Lessons and opportunities from metros in the EU and Asia,” (presented at the Global Metro Summit, Chicago, IL, December 7-8, 2010). Accessed online January 27, 2011, http://www.brookings.edu/~media/Files/events/2010/1208_metro_summit/1208_metro_summit_global_paper.pdf
5. *Ibid*
6. *Ibid*
7. United Nations Environment Programme Green Economy Initiative, “Sustainable Urban Planning in Brazil,” Accessed January 28, 2011, <http://www.unep.org/greeneconomy/SuccessStories/SustainableUrbanPlanninginBrazil/tabid/4656/language/en-US/Default.aspx>
8. *Ibid*
9. *Ibid*
10. Christopher Leinberger, “The Next Real Estate Boom,” Brookings Institution, Accessed January 27, 2011, http://www.brookings.edu/articles/2010/11_real_estate_leinberger.aspx
11. *Ibid*
12. *Ibid*
13. “Seattle – Puget Sound: catalyzing the regional energy efficiency cluster to stay ahead,” (presented at the Global Metro Summit, Chicago, IL, December 7-8, 2010). Accessed online January 27, 2011, http://www.brookings.edu/~media/Files/events/2010/1208_metro_summit/1208_business_plans/1208_conference_guide_seattle.pdf
14. *Ibid*
15. See *supra* note 10
16. See *supra* note 10
17. See *supra* note 10

Planners have the power to engender economic growth by promoting transit-oriented development that improves quality of life and makes cities more attractive to residents and businesses.

forty-five percent of all trips – of any Brazilian city, leading to the country’s lowest rates of air pollution.⁸ Curitiba Industrial City, an area planned thirty years ago with strict environmental controls, is now host to 700 companies that have directly or indirectly created 200,000 jobs and account for twenty percent of the state’s export revenue.⁹

American cities certainly have the capacity for sustainable development, and certain trends indicate that Americans’ neighborhood preferences are beginning to shift. Christopher Lienberger, noted real estate scholar and author of *The Option of Urbanism: Investing in a New American Dream* asserts that American consumers are demanding walkable, transit oriented communities. “The Great Recession,” he argues, “has highlighted a fundamental change in what consumers do want: homes in central cities and closer-in suburbs where one can walk to stores and mass transit.”¹⁰ For the first time in fifty years, houses in dense, diverse, and walkable neighborhoods are more valuable per square foot than their counterparts in sprawling, car-dependent exurban neighborhoods.¹¹ Baby Boomers and Millennials alike are beginning to understand the high, hidden costs of suburban housing and are choosing to live where automobiles are not required, freeing their income for other pursuits and raising their quality of life.

Sustainable urban neighborhoods present other opportunities for economic growth. Leinberger argues that regulations and incentives that encourage smart growth and energy efficiency would not only create millions of construction jobs, but would “create new markets for power-conserving materials and appliances, providing American designers and manufacturers with experience producing the kinds of green products world markets will increasingly want.”¹²

ten years, and new investment in the “Building Energy Efficiency Testing and Integration Center and Demonstration Network” will continue to promote entrepreneurialism and innovation.¹⁴ Portland, Oregon has also realized the economic potential of sustainable development: a \$50 million streetcar project spurred \$3.5 billion in private sector development along its route – even before it was built.¹⁵

Planners have the power to engender economic growth by promoting transit-oriented development that improves quality of life and makes cities more attractive to residents and businesses. To capitalize on these opportunities, planners and policymakers must revamp the antiquated laws and programs that have incentivized decades of unsustainable development. Nascent efforts to rebuild American infrastructure – such as the Department of Transportation’s TIGER I and TIGER II programs – must be intensified. Planners must transform archaic zoning codes that make walkable urbanism all but illegal.¹⁶ Most importantly, planners and business leaders at the local, state, and regional levels can transcend partisan politics, as they did in Salt Lake City, Utah. In a state that voted 63 percent for John McCain and Sarah Palin in the 2008 election, the “Envision Utah” plan has promoted “quality growth” through the construction of, and continued taxpayer



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