INTERPLAN

APA American Planning Association
International Division
Making Great Communities Happen

A Publication of the International Division
of the American Planning Association

opening the doors to global understanding

WINTER 2011 | In this issue...

APA American Planning Association
International Division
Making Great Communities Happen

Welcome to *Interplan!*

by Beth Offenbacker, Chair

This issue of *Interplan* showcases some of the fascinating work our APA ID members are doing in two African countries. Read on for Marijoan Bull's reflections on planning in Kenya, and Kojo Fordjour discusses how trees are used to modify microclimates in West Africa.

In this issue, those of you who are interested in keeping your planning libraries up to date won't want to miss the story about Don Elliott's recent book, "A Better Way to Zone: Principles That Create More Livable Cities."

We also encourage you to check out a report back from the APA ID membership about the Division's work and also from APA. We're pleased to know we've been successful in serving your needs and look forward to working with you to advance the practice of planning in an international context!

Cities: Can we Solve Their Problems?

In the early 1990s, Colombia's capital city was known for the uncontrolled growth, crime and pollution that stifled its economy. A 1993 article ranked Bogota fourth in Latin America and among the world's worst twenty cities for air pollution. Locals said the the city was becoming as "unmanageable" as its larger peers, México City and Saõ Paulo[1]. Instead of continuing along its seemingly predetermined path, the city's politicians and planners charted a new course from the early 1990s. They began tackling the city's problems - from the high crime rates and the deteriorating environment - with an overarching goal of creating a liveable city where the needs of its citizens were prioritized first.

(continued on page 8).

Reflections: An American Planner in Kenya

By Marijoan Bull, AICP
Assistant Professor, Geography and Planning
Westfield State University, Massachusetts

After twenty years experience in American land use planning, the discussion had a familiar ring—where the watershed boundaries were drawn, the effects of aggregated individual actions, and how best to motivate people to make choices based on the greater good rather than a narrow self interest. But this meeting of thirty-five residents was convened in the morning hours of a weekday, in the shade of Mjohoro tree. All of the participants were subsistence farmers, taking a break from their hard physical labor, sharing soda and bread, while considering the future of their community. During the past two years I had the opportunity to work with colleagues in rural western Kenya on a World Bank funded sustainability initiative. This opportunity has led to an exchange of ideas and a discovery of shared affinities. I have been struck by the great similarities in our work, while also learning from the differences.

Certainly the settings and the forces driving development could not have been more different. My planning experience has focused on containing suburban sprawl, renewing urban neighborhoods through brownfield revitalization, and undertaking visioning exercises to move beyond fiscally driven land use decision making. Very few of the residents I interacted with worked the land, and all had a clean and reliable water supply. Meetings were held in the evenings when most people were home from work, and many felt development pressures and changes were being driven by large impersonal forces. It was not unusual to see factions of "old-timers" versus "newcomers."

In western Kenya we worked with small land holders (less than 2 acres) who traveled miles for river water, and the concerns were about low crop yields, erosion, and mastering agro-forestry. The changes to the natural landscape came about as the farmers themselves pursued an agriculture livelihood (the sole option) to feed their families. The communities were small and tight-knit, and land development was driven by family lot subdivisions as male children married.

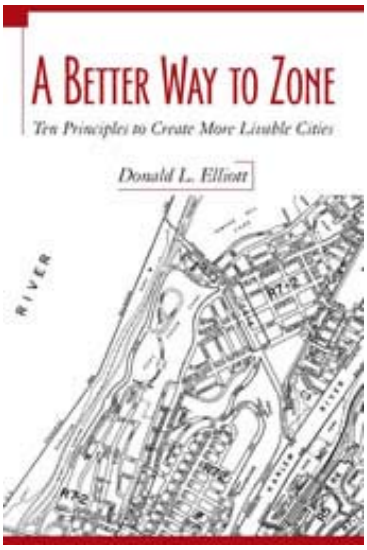
What I learned is that despite these major differences much of our core work is the same:

(a) Whether in the United States or Kenya, a large part of land use planning is education. Some of our most interesting exchanges revolved around how to explain the science behind natural environmental cycles and human interventions (including climate change and green house gases). There was genuine surprise when I related how I, too had to educate on the basics of what a watershed is, and how runoff is related to pollution and localized flooding.

(b) My Kenyan colleagues and I are both working to get individuals to embrace a greater good resting on changes in individual behavior and a collaborative commitment to the future. Many of our conversations were about how to motivate what we believe is an intrinsic human orientation toward community building. Residents at the outdoor meetings in Kenya often brought up the importance of getting those not present to understand the need for change—a sentiment common among participants in my US based work.

(c) Another commonality is the inevitability of conflict. Negotiation among competing interests is a central part of land use planning no matter the setting. My Kenyan colleagues were masterful at working through conflict and recognized its value, so I benefited greatly from observing their skills. Here negotiation may be about how much land to conserve, or an acceptable density for housing. There conflict arose over what species of trees to plant and how to cooperate to get the best price for surplus crops. Human nature being human nature, we could also

(Continued on Page 4)



Nearly all large American cities rely on zoning to regulate land use. According to Donald L. Elliott, however, zoning often discourages the very development that bigger cities need and want. In fact, Elliott thinks that zoning has become so complex that it is often dysfunctional and in desperate need of an overhaul. *A Better Way to Zone* explains precisely what has gone wrong and how it can be fixed.

A Better Way to Zone explores the constitutional and legal framework of zoning, its evolution over the course of the twentieth century, the reasons behind major reform efforts of the past, and the adverse impacts of most current city zoning systems. To unravel what has gone wrong, Elliott identifies several assumptions behind early zoning that no longer hold true, four new land use drivers that have emerged since zoning began, and basic elements of good urban governance that are violated by prevailing forms of zoning. With insight and clarity, Elliott then identifies ten sound principles for change that would avoid these mistakes, produce more livable cities, and make zoning simpler to understand and use. He also proposes five practical steps to get started on the road to zoning reform.

While recent discussion of zoning has focused on how cities should look, *A Better Way to Zone* does not follow that trend. Although New Urbanist tools, form-based zoning, and the SmartCode are making headlines both within and outside the planning profession, Elliott believes that each has limitations as a general approach to big city zoning. While all three trends include innovations that the profession badly needs, they are sometimes misapplied to situations where they do not work well. In contrast, *A Better Way to Zone* provides a vision of the future of zoning that is not tied to a particular picture of how cities should look, but is instead based on how cities should operate.

A Better Way to Zone

Author Donald L. Elliott is an attorney and city planner with extensive experience in real estate and land use planning. He is a senior consultant in the Denver, Colorado, office of Clarion Associates, a national land use and real estate consulting firm. Elliott is a Fellow of the American Institute of Certified Planners, a member of the International Division, and a former project director for downtown and Gateway zoning for the City and County of Denver. For more information on his new book, visit ISLAND PRESS for details.

An American Planner in Kenya

(Continued from Page 2)

commiserate about how best to deal with disruptive individuals and those difficult personalities.

(d) Residents often have the best ideas. While I find the general state of public participation in US planning leaves much to be desired, it is the cornerstone of my personal approach and I am always striving for greater and more meaningful participation. This is in part because it has been my experience that the public often brings new insights or specific proposals that add to the conversation. This was also true in western Kenya. There is no substitute for the direct experience and wisdom of residents, be they farmers or software engineers.

On the other hand, there were real limitations to my direct application of US planning approaches to the western Kenyan experience, and some major differences in our day to day work.

(e) There were points in our work when, if I had been in the US, I would have suggested a regulatory solution– e.g. river protection or tree specimen protection. Such an approach had little effectiveness there, as enforcement is rare, in part due to the lack of manpower and in part due to extenuating circumstances. Some of the best management practices we sought to implement were already on the books. We needed to consider a more direct approach, relying on education and the power of seeing something work, to convince people to change their practices.

(f) The planning process in rural western Kenya requires a higher level of commitment and the logistics are demanding. Residents in western Kenya were giving up time during the work day to attend our meetings (without electricity evenings would not have been possible). This was no small sacrifice. For my colleagues getting to the meeting areas meant a lengthy and physically demanding ride over poor roads. By the end of some very long days, one was weary simply from traveling to and from meetings. Cell phones have made communication much easier, but given the difficulties of travel for the planners and the residents (most walked several miles to attend) changes in plans or emergencies could cost all of those involved an entire day's worth of time.

(g) Unlike the many planning meetings I have run and attended, these planning meetings often integrated song, story, and/or prayer. In some instances songs of thanks were offered for the trainings, in other cases we sang to mark a special occasion. Those instances when prominent officials were in attendance the songs were accompanied by drumming and dance. Residents themselves often spoke in poetic terms. Some words I was particularly struck by include this frank, yet poetic, assessment of deforestation: "the stomach has eaten the trees." One colleague perfected, to great effect, her telling of the tale of the lifelong partnership between trees and people, describing the symbiotic relationship from birth through death. It was refreshing to see the direct integration of the emotive and spiritual—an integral part of the human expression of place relationship—in planning.

This winter one of my Kenyan colleagues will visit here, and we will spend time meeting with watershed groups and attending planning meetings. I am very curious to hear her impressions and very grateful for this mutual exchange. Working with the residents and planners of western Kenya has renewed my commitment to planning and offered new insights into the context-based realities and the universal aspects of the work of sustainability.

PHOTO: Meeting to assess progress of best management practices initiative in western Kenya, 2010; photo by author.

Marijoan Bull, PhD, AICP is a member of the International Division and teaches Regional Planning at Westfield State University in Westfield Massachusetts. She has over twenty years experience in land use planning, and wishes to thank her colleagues, Ruth Orlale and Dorcas Mutsotso for their wisdom and friendship.

Using Trees to Modify Micro-Climates

by Kojo Fordjour, AICP
Article extracted from "The Use of Tress to Modify Microclimate in Hot-Humid Tropical West African Urban Centers", 1985

After so many years of wanton and haphazard urbanization and urban development, man has finally realized the need to design with nature for harmony and ecological balance (McHarg, 1969). However, it is not until recently that research and political attention was drawn in the direction

Using Trees to Modify Micro-Climates

(Continued from Page 6)

of climatic consequence of urbanization, global warming, climate change and green house gases. Man's urbanization process has destroyed many desirable microclimates. The process promotes extremes in daily maximum and minimum temperatures, and modifies the total microclimate of urban centers. This has resulted in climate change. Emerging studies in landscape architecture and urban design have explored the reversibility of the uncomfortable climatic condition in urban areas through natural means http://edis.ifas.ufl.edu/eh144. A fair amount of microclimatic manipulation could be practiced by planting trees around houses and in urban open spaces and along sidewalks and streets to block solar radiation hitting the earth surface. Physical functions of trees should be emphasized by urban designers, landscape architects and policy makers in their decisions.

The design of outdoor building space microclimate in hot-humid cities must be directed toward shading and temperature reduction, especially by trees for human thermal comfort and building space conditioning. Trees have been found to be very effective in improving human thermal comfort and building space conditioning by shielding us from direct solar radiation because we are exposed to less solar radiation beneath tree canopies. Trees provide shade and also have an active cooling mechanism in the form of evapotranspiration. Temperature in forested plot or under tree canopy is 5 ºC (41 ºF) lower than temperature in cleared plot. Tree canopy intercepts about 90 % of the solar radiation, 10 to 25 % of which is reflected back to space, and as little as 1% is used for photosynthesis or for making the tree's food. Since contact with European powers in the last hundred years, West African urban centers have undergone tremendous changes in every aspect of their construction and physical organization. The old style mud houses with thatched roofs have been replaced by concrete cement blocks, and dirt roads replaced by paved ones. The small traditional community settlement is being replaced by more complex urbanized settlements. The introduction of these buildings and construction materials has far-reaching consequences. "The urban natural ground surface has been obscured by building and pavements; the blue sky is ashed by air pollutants; and vegetation is diminishing to seemingly and artifact of culture, a mere reflection of man's desire rather than his needs." (Detwyler and Marcus, 1972).

In all developing regions of the world, there is a need to realize the potential benefits and consequences of growth. The rapid rate of urban growth started in the sixties has created very serious problems. Radical industrialization program of most West African countries including Ghana and Nigeria has let to rural-urban migration. In 1950 there was only four areas significantly urbanized. Nigeria was the only one in Sub-Sahara region. Today, more than 30% of Africans lives in urban centers. The cityscapes are changing under economic and social pressures. The existing urban forest and fertile lands have disappeared without replacement. Urban renewal, street widening, various demand for open space and new concerns for safety have all contributed toward the removal of trees. The effects of urbanization on microclimate were recognized in Nigeria and other West African states back in 1960's. Urban settlement has reduced the capacity of surface materials to reflect solar radiation over build-up areas in Nigeria more than 22%. Rural areas have higher reflective coefficient because of the forest and vegetation. Increase in combustion, metabolism replacement of vegetation with concrete, asphalt and other building material has led to the development of urban heat island, and phenomenon whereby heat is absorbed by building structures, tarred roads and other hard surfaces and slowly released at night to warm up the urban atmosphere. http://www.state.nj.us/dep/dsr/research/urbanheat.pdf.

Climate is known to be the most influential variable on man's health, energy, and comfort. Climate changes such as temperature, humidity, wind and atmospheric pressure determine human physical and mental health. Man's physiological vigor may decrease with significant increase in temperature and humidity. Man functions better

physically and mentally under certain optimum climatic conditions. His efficiency decreases outside this range. Maximum temperature that one can perform extended work without increase in body temperature has a threshold of 65.6 ºC (150 ºF) in dry air, but can be reduced to only 34.4 ºC (94 ºF) in full humidity of 85% condition in West Africa. Productivity in Ghana and other West African countries are low because it is very uncomfortable to work during hot days, and very difficult to sleep at night without air conditioning device, and as a result one wakes up in the morning exhausted from inadequate sleep. The comfort zone for humid tropical region has been defined by as temperature between 23 and 29 ºC (73.4 – 84.2 ºF) within humidity range of between 30 and 70 %. Temperature range of 24-31 ºC (75 – 88 ºF) with relative humidity 83% was recorded for Ife University Campus in Nigeria in a study by Tishler.

In the developed world, mechanical air conditioning has been developed to alleviate the discomfort associated with climate change or modification. In the developing countries this application is an affective and direct way of creating favorable indoor climate. However, it is expensive and out of reach for many millions who has no necessary resources of power or energy.

Trees have been found to be effective in alleviate discomfort associated with extreme temperature and heating effect in urbanized areas. Without shading, the average ground temperature in West Africa remains higher than the maximum air temperature of the surrounding rural areas. The temperature of an unshaded pavement can easily be 43 ºC (109 ºF) on a day when the air temperature is 34 ºC (93 ºF) (Tishler et, al. 1971). For this reason the treatment of the ground surface is very important. More shaded grass must replace concrete pavement to reduce ground surface heat. Strategic location a building beneath mature tree canopies provides the required shade at the right times of the day. Planting dense shade trees on the east side of a building reduces morning and midday inside temperature and provides a reduction of a 55 % of the cooling energy bill (McPherson, 1983) http://www.springerlink.com/content/mpxk119y7kk9gp7t/fulltext.pdf. Trees on the west reduce inside temperature by 6.5 ºC (43.7 ºF) during late afternoon and early morning hours. A monetary savings of $70 to $100 per year in air conditioning was gained by home owners who planted trees around their mobile homes on Alabama, USA where summer temperature is very hot and air conditioning is a standard requirement for homes. The result of this study is applicable to other building types anywhere in the world.

Vegetation will delay afternoon solar heating of structures, thereby reducing energy demands during peak demand periods. It has been shown that the shading of a building by tall vegetation, for example palm trees can drastically reduce and, in some cases, eliminate the need for supplementary cooling of structures during warmer seasons. The positioning of vegetation relative to the structure to be protected is of critical importance in terms of energy conservation. Shading roofs with tree canopies has also been found to be very effective. The percentage of roof shade does not need to be 100% for the best result. The most effective positions are trees on all sides overhanging the house to shade the roof, because the sun is at its highest altitude angle in the sky and overhead most of the day in West Africa. Planting tall palm trees and other evergreens to cover the roof is a good strategy, and in some cases, makes installation of air conditioners unnecessary. The south, north and west sides of the build should be covered with shade trees for optimum human thermal comfort and building space conditioning.

Urban climatology and forestry has added a new dimension to the urban planning and design profession. The layout of cities has nearly always been dictated, or almost accidentally created, by a series of mainly political, social and economic decision processes. But more recently, the principles of urban climates, green house gases, etc have been applied in an increasing number of urban growth, renewal

Using Trees to Modify Micro-Climates

(Continued from Page 6)

and new city designs. In regional and town planning, a climatological input at the macro and micro-scales will determine the properties of the green field site in all major respects, such as insulation, temperature, air flow, precipitation etc. Knowledge of these influences has helped to determine the major land-use patterns, such as zoning, orientation of buildings, development densities, heights, and the size and location of open spaces. Several models can be found in many parts of developed world. They include LEED; Sustainable Development; Planned Unit Development; Walkable Communities; Commute Trip Reductions; Congestion Management; Livable Communities, Context Sensitive Solutions, Etc. Vegetation (mango, coconut, Mahogany, Flamboyant, etc) should be included with other devices for shading and cooling in hot-humid tropical West Africa. It is cost effective to use trees as shading devices. Moreover, they have secondary benefit of cleaning the air, beautifying West African urban centers, screening and providing privacy, stabilizing the soil, attracting wildlife, etc. Techniques and criteria should be developed for management of energy-conservation and shade trees so that maximum energy conservation values and human thermal comfort of such planting are maintained over the life-span of the building.

Kwadwo (Kojo) Fordjour, AICP, Environmental and Community Development Consultancy, Ghana/ USA - Fordjourk@msn.com, (206) 234-1624

Cities: Can we Solve Their Problems?

(continued from page 1)

The city invested in projects and programs to benefit its citizens direct ways: parks and bikeways to provide recreation and encourage healthy activity, a better public transit system to connect people with jobs, and new strategies designed to create a more attractive, liveable and humane city. In the process, the city may undertaken strategies that "accidentally" supported a more robust economy in the city.

Less than two decades later, Bogotá is a much safer and, by some measures, a less polluted city. Bogotá is more than safe; the city cut its homicide rate by nearly a third - to a level less than that of Washington, DC. The city still struggles with air pollution, but Bogotá's planning and environmental strategies have produced positive results[2].

(continued on last page)

What Our Members Think of the Division

By the International Division Leadership Team

Each year the divisions of the American Planning Association prepare an annual report. The report covers all aspects of division activities and finances, and divisions are encouraged to conduct a member survey at least every three years.

As you may be aware, the International Division has conducted an annual survey each of the last three years to guide the division's work plan and identify those activites that best serve our members. Member responses to the survey have directly shaped our work plan each year. Our most recent survey was completed in the last few months of 2010, and the results are shown on Page 7 with comparisons to the 2008 and 2009 surveys.

The members of the International Division have been increasingly positive about the division's activities and performance, and our membership has remained stable even as other divisions have struggled to maintain membership levels in this tough economy. However, declining member participation is one of our key challenges!

For 2011, the International Division plans to continue to deliver a robust array of activities, including our cost-effective webinars that offer AICP CM credits and are free to members. To view our plan for 2011, along with our report on the division's activities in 2010, please visit the International Division's page on the APA website.

International Division Grants

The International Division awards several modest grants each year to support the international research activities of division members. Grant recipients are asked to share their international experiences by writing an article in *Interplan*.

How APA Rates the International Division

Each year, the APA national office uses the annual reports to rate the performance of each division according to key criteria. In 2009, the International Division received a rating of "exceeded performance requirements." Our key shortcoming was a failure to include a "summary of major accomplishments" in our 2009 annual report, but APA's performance checklist indicated that the International Division met all of the substantive performance measures.

Among the key challenges for the division in 2009 was an excess fund balance. Many members are not aware that APA retains a portion of the $25 annual membership dues to cover the cost of collecting the funds and providing administrative overhead functions for the divisions. Nonetheless, the International Division had an excessive cash balance, according to APA standards which limit the total reserves per division member. APA indicated that the division must identify a plan to reduce the excess cash balance.

On the whole, the International Division was commended for providing its members with ample opportunities for CM credit and for its overall approach in delivering services to members.

APA International Division Member Survey

October-November 2010 Survey with Comparison to July-August 2008 and Sept 2009 Surveys

	Count	Percent	In 2009	In 2008
Total Responses	31		50	64
Members/Response Rate	306	10%	15%	N/A

Surveyed Last Year	Count	Percent	In 2009	In 2008
Yes	N/A	N/A	28%	N/A
No, Not a Member	N/A	N/A	20%	N/A
No	N/A	N/A	52%	N/A
Unsure (Note 2)	N/A	N/A	0%	N/A

Location	Count	Percent	In 2009	In 2008
International				
Canada	1	3%	2%	3%
Latin America	0	0%	0%	0%
Asia/Pacific	2	6%	10%	6%
Africa	0	0%	0%	0%
Middle East	0	0%	2%	2%
Europe	0	0%	2%	0%
United States				
Northeast & DC	6	19%	20%	25%
Midwest	4	13%	14%	6%
South & Southeast	4	13%	16%	16%
Southwest	1	3%	4%	3%
Mountain	3	10%	6%	8%
West Coast	7	23%	20%	28%

Experience	Count	Percent	In 2009	In 2008
Student	3	10%	6%	6%
Up to 5 years	5	16%	24%	38%
6-10 years	5	16%	6%	11%
11-20 years	9	29%	26%	17%
20+ years	9	29%	36%	27%

Age Group	Count	Percent	In 2009	In 2008
Under 25	1	3%	0%	2%
25-34	6	19%	20%	36%
35-44	10	32%	28%	23%
45-54	5	16%	20%	14%
55-64	7	23%	18%	16%
65+	2	6%	12%	9%
Refuse to Answer	0	0%	4%	0%

APA-ID Member	Count	Percent	In 2009	In 2008
Less than a year	5	16%	22%	23%
1-2 years	5	16%	24%	28%
3-5 years	10	32%	22%	20%
6+ years	11	35%	32%	27%

International Experience	Count	Percent	In 2009	In 2008
Yes - Work	19	61%	54%	47%
Yes - Volun./Intern	1	3%	6%	13%
Yes - Study/Rsrch	3	10%	4%	22%
Yes - Not Planning	3	10%	22%	8%
No / No Response	7	23%	22%	20%

Other Division Member	Count	Percent	In 2009	In 2008
Yes	15	48%	36%	50%
No / Unspecified	15	48%	64%	50%

Relevance of Activity	Very Rel.	Somewhat	A (Note 3)	Not Rel.
World Town Planning Day	48%	6%	45%	0%
Webinars on Planning	60%	20%	20%	0%
Message to New Members	2%	59%	24%	17%

Reason for Division Membership Average Rank 1.0 = highest priority		Average Ranking In 2009	 In 2008
Interest in working abroad	2.9	3.0	2.8
Interest in volunteering	4.4	4.0	4.0
Information on global issues	1.9	1.8	2.0
Interest in exchange program	3.4	4.0	3.3
Contact with int'l planners	2.7	3.1	3.4
Other	5.3	5.5	5.3

APA-ID Services Used	Count	Percent	In 2009	In 2008
Interplan newsletter	26	84%	84%	89%
eNews newsletter	26	84%	88%	N/A
Annual Meeting	7	23%	4%	20%
Conference session	8	26%	16%	17%
Division Grant	1	3%	6%	2%
Webinar	13	42%	38%	0%
Google Groups	10	32%	22%	N/A
Facebook Page	6	19%	8%	N/A
ListServe	N/A	N/A	N/A	9%

Level of Satisfaction	Count	Percent	In 2009	In 2008
Very Satisfied	6	19%	22%	6%
Some Satisfaction	13	42%	32%	30%
Neutral	6	19%	30%	34%
Some Dissatisf'tion	4	13%	14%	20%
Very Dissatisfied	2	6%	2%	6%

Communication Quality	Count	Percent	In 2009	In 2008
Excellent	9	29%	24%	9%
Good	16	52%	56%	55%
Fair	3	10%	8%	5%
Average	2	6%	6%	25%
Poor	0	0%	4%	2%

Services Improved	Count	Percent	In 2009	In 2008
Yes, Significantly	6	19%	30%	N/A
Yes, Somewhat	12	39%	34%	N/A
No Change	7	23%	10%	N/A
No, Worse Service	0	0%	0%	N/A
Unsure/Don't Know	6	19%	22%	N/A

Allocation of Resources	Average Allocation	In 2009	In 2008
Grants	$13.79	$13.85	$10.00
Conference Sessions	$9.55	$12.00	$11.69
Webinars	$12.59	$23.02	$14.80
World Town Planning Day	$7.68	N/A	N/A
Interplan Newsletter	$8.97	$13.48	$14.62
eNews Newsletter	$7.79	$12.78	N/A
ListServ	N/A	$8.40	$7.10
Organize Conf. Social Event	$4.21	$4.02	$5.47
International Relationships	$14.21	$15.11	$16.95
Facebook Page	N/A	$3.00	N/A
Google Groups Networking	$2.48	$3.61	N/A
Online Social Networking	$1.46	$1.52	N/A
International Exchanges	$17.72	$16.57	N/A
Email to Members	N/A	N/A	$6.26
Information Blog	N/A	N/A	$6.47
Networking Blog	N/A	N/A	$4.74

Willing to Volunteer	Count	Percent	In 2009	In 2008
Write an Article		N/A	34%	33%
Guest Speaker		N/A	12%	11%
Conf. Social Events		N/A	8%	11%
Serve as a Mentor		N/A	22%	N/A
Being Mentored		N/A	20%	N/A
Exchange Program		N/A	40%	N/A
Student Committee		N/A	12%	N/A
Int'l Liaison Comm.		N/A	40%	47%
Strategic Planning		N/A	18%	41%

Notes

(1) Not all respondents answered all questions

(2) Answers were adjusted based on whether respondents actually completed prior year's survey.

(3) Relevant activity but member did not participate.



Bogotá's bike lanes (left). Historic preservation (center). A suburban shopping district (right).

Cities: Can we Solve Their Problems?

(continued from page 8)

Nonetheless, a more prosperous Bogotá has seen the number of cars in the city triple from the early 1990s, and population has grown by 62% in just two decades[3]. In spite of its growth and prosperity, only one private car is registered for every seven residents, a low rate of car ownership even in comparison to other large cities in Latin America[4]. In spite of the lower rate of car ownership, the city's autopistas (motorways) are perpetually clogged with traffic, and the situation promises only to get worse.

Among the most innovative of Bogotá's transportation and air quality solutions has been TransMilenio, the city's bus rapid transit (BRT) system. Bogotá's BRT began as an idea to consolidate the tens of thousands of buses buses operated by nearly as many private companies into a coherent rapid transit system that would be less costly to build than a rapid rail system. The first trunk line on Caracas Avenue, Bogotá's "main street," included branches on either end to link the city's impoverished neighborhoods in the south to the wealthier communities and commercial districts in the north. Bus lanes – two in each direction – were carved out of Caracas Avenue and added to wider footpaths, street trees and enough space for enclosed stations that function more like those on a metro line than those of a typical bus stop. Nearly 1.4 million passengers enter the TransMilenio system each day. The buses are fast and efficient, but they are typically jam-packed at all times of day and in every direction.

Construction of TransMilenio is ongoing, and Phase II has recently been completed. The system now includes two central lines and seven distinct branches totaling 84km traveled by more than a thousand 160-passenger (articulated) buses operating as troncales (trunk routes). Over 70 fare-free feeder routes and nearly 1,500 bicycle parking spaces connect passengers to the main BRT system[5], not including those who transfer from the city's 20,000 private urban busetas, small private buses that operate corriente (through) and colectivo (circulator/collector) service. Construction recently began on the third phase of the system (the plan includes seven phases), and funding for the construction of an underground metro was announced by the Mayor's Office in partnership with the national government in December 2010.

In 1990, the view of Bogotá's future was bleak. Nonetheless, the city changed course and became a model for coping effectively with growth, transportation and pollution. In short, Bogotá proves that difficult urban challenges have solutions and that, with political will and public support, large cities can be transformed into liveable places.

Keith Hall
Vice Chair of Communications

1 Growth, Pollution and Crime Stifling Bogota, New York Times, Sept. 9, 1993.
2 Secretaria Distrital de Ambiente, Sistema de Informacion Ambiental (SIA), Base de Datos 1991-2010.
3 Departamento Administrativo Nacional de Estadistica (DANE), 1985-2005.
4 Portal de la Ciudad de Bogota.
5 TransMilenio System, a presentation to the C40 Cities conference, Angelica Castro Rodriguez, 2007.

Photos by Author