URBAN EXPANSION

THE COLOMBIAN URBAN EXPANSION INITIATIVE: **INTERIM REPORT 1**

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NOVEMBER 2013

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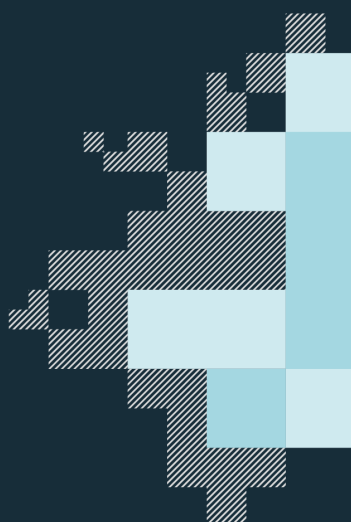
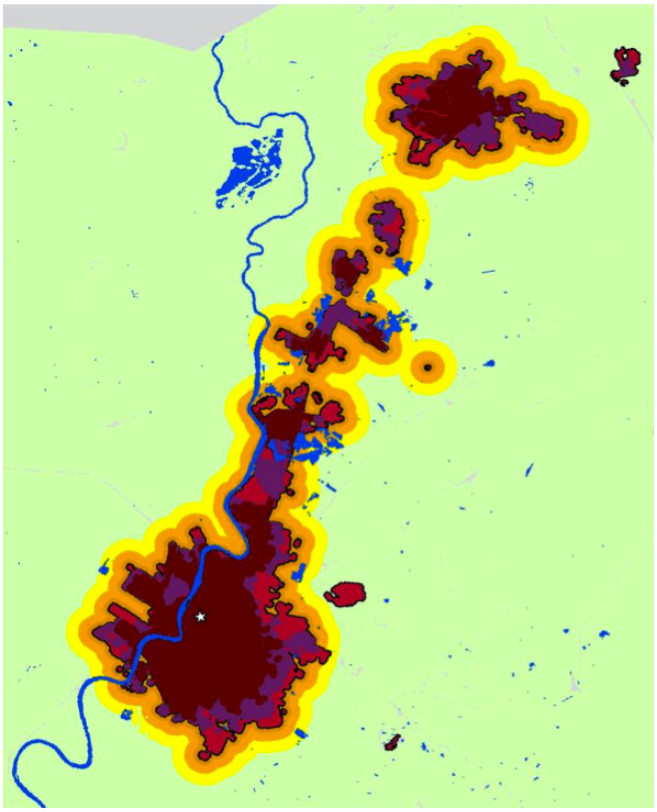


A MUNICIPAL ACTION PROGRAM TO SECURE THE LANDS FOR PUBLIC WORKS ON THE URBAN PERIPHERY OF RAPIDLY-GROWING COLOMBIAN CITIES IN ADVANCE OF THEIR PROJECTED URBAN EXPANSION

Background and Objective

The Urbanization Project at New York University (NYU) launched an important new program in 2012 that focuses on rapidly growing cities: the *Urban Expansion Initiative*. This initiative is aimed at assisting rapidly growing cities in developing countries in preparing for their inevitable expansion. While firmly based on a ten-year global study of urban expansion, this initiative is not a study, nor is it simply a paper plan. It is an action program aimed at getting real and tangible results in a select number of cities with competent and farsighted municipalities—supported by their central government and by their regional or departmental governments—that can take a leadership role in making realistic preparations on the ground ahead of their expected expansion and serve as role models for other rapidly growing cities the world over. Colombian cities—which now all have the capacity to plan and prepare for their future—are prime candidates for participation in this initiative.



Montería, Colombia, 1989-2040.

One member of our team, Nicolas Galarza Sanchez recently identified a total of 461 cities in Latin America and the Caribbean that had 100,000 people or more in 2010. One out of seven of these cities—a total of 66 cities—can be considered *rapidly growing cities*, defined simply as cities whose populations grew at 3% per year or more between the latest two census dates. No less than 9 Colombian cities (14 percent of the total) were on this list: Santa Marta, Villavicencio, Valledupar, Buenaventura, Riohacha, Tunja, Yopal, Quibdo, and Florencia. Four selected cities among these rapidly growing cities with the addition of a fifth city, Monteria[1] (see table 1 below) are the focus of the Colombia Urban Expansion Initiative. The largest Colombian cities—Bogotá, Medellin, Cali, and Barranquilla—are not included in this initiative at the present time, as they are now growing at slower rates.

The built-up areas of these cities can be expected to expand at an even faster rate than their populations. As a recent study by another member of our team, (Shlomo Angel's *Planet of Cities*, 2012) demonstrated that, when urban population growth is accompanied by economic development and by the increasing availability of inexpensive transport, the consumption of *urban land per person* grows as well. A study of a global sample of 120 cities found that their built-up area grew twice as fast, on average, as their population in the 1990s. Urban area per person grew, on average, at 2% per year during this period. It grew at an average annual rate of 1.5% in a smaller representative sample of 30 cities between 1800-and 2000. The population of Paris, France, to take a concrete example, grew *20-fold* between 1800 and 2000 while its built-up

1 Monteria was selected at an earlier phase of this initiative as the representative Colombian city in the Emerging and Sustainable Cities Initiative of the Inter-American Development Bank.

CITY	PROJECTED CITY POPULATION						
	IN 2010	IN 2020	IN 2020 MULTIPLE OF 2010	IN 2030	IN 2030 MULTIPLE OF 2010	IN 2040	IN 2040 MULTIPLE OF 2010
Santa Marta	440,612	559,368	1.3	663,550	1.5	740,092	1.7
Valledupar	346,817	451,161	1.3	543,617	1.6	613,125	1.8
Montería	322,412	397,161	1.2	461,080	1.4	507,227	1.6
Tunja	168,526	215,742	1.3	257,457	1.5	288,254	1.7
Yopal	129,799	251,552	1.9	403,915	3.1	546,695	4.2

Table 1: Preliminary population projections for the five rapidly growing Colombian Cities (preliminary data), 2010-2040[2]

area grew *200-fold*. Urban land per person in Paris (see figure 1 below) grew at an average annual rate of 1.1% during this period.

We can calculate preliminary estimates of the expected expansion of these cities given five realistic assumptions about the annual growth of urban area per person:

- Very low projection: A 2% decrease in urban area per person per year;
- Low projection: A 1% decrease in urban area per person per year;
- Middle projection: No change in urban area per person per year;
- High projection: A 1% increase in urban area per person per year; and
- Very high projection: A 2% increase in urban area per person per year.

Given these initial assumptions, we can begin to estimate how much land these five Colombian cities will require for their expansion during the next 30 years—more specifically, between 2010 and 2040. The middle, high, and very high projections are shown in table 2 below.

The historical and (provisional) projected expansion of Monteria is shown on the cover of this document. The extent of the built-up area of the city has been mapped from satellite imagery for 1984, 1994, and 2007. The projected expansion under all five assumptions listed above was estimated assuming that expansion will take place at the same rate in all possible directions, while avoiding steep slopes or water bodies. The furthest projected extent of the city is the outer edge of the yellow buffer, the projected outer limit of the built-up area of the city assuming a 2% increase in urban area per person per year.

Table 2 below displays the estimated built-up areas of five rapidly growing cities in Colombia focusing only on the middle, high and very high projection. As the table shows, according to the middle projection, by 2040 the areas of cities will grow by the same multiple as their population: Yopal will more than quadruple its built-up area by 2040. According to the high projection—a 1% annual increase in urban area per person—all 5 cities are projected to more than double their built-up areas between 2010 and 2040. Yopal will increase it more than fivefold. According to the very high projection—a 2% annual increase in urban area per person—4 of the 5 cities may increase their areas *more than threefold* between 2010 and 2040; Yopal will increase it more than sevenfold. These projections are preliminary, of course. Still, even given a large margin of error, the numbers speak for themselves. And as the historical expansion trajectories of other rapidly growing cities have shown, they are not unrealistic or unreasonable.

These cities now face a simple yet ominous choice: They can seek to block this projected expansion with containment strategies—such as greenbelts, smart

2 Based on the assumption that city growth rates will decline at the same rate as the national urban population growth rate, as projected by the U.N. (U.N., 2012, World Urbanization Prospects-the 2011 Revision, table 1): The national growth rate in 2010-20, 2020-30, and 2030-40 is expected to decline to 79%, 56% and 36% of the 2000-10 rate respectively.

CITY	ESTIMATED CITY AREA IN 2010 (HECTARES)	PROJECTED CITY AREA IN 2040 (HECTARES)					
		NO INCREASE IN CITY AREA PER PERSON PER YEAR		1% INCREASE IN CITY AREA PER PERSON PER YEAR		2% INCREASE IN CITY AREA PER PERSON PER YEAR	
		CITY AREA IN 2040	AS MULTIPLE OF CITY AREA IN 2010	CITY AREA IN 2040	AS MULTIPLE OF CITY AREA IN 2010	CITY AREA IN 2040	AS MULTIPLE OF CITY AREA IN 2010
Santa Marta	2,645	4,443	1.7	5,997	2.3	8,095	3.1
Valledupar	2,474	4,374	1.8	5,904	2.4	7,969	3.2
Montería	3,598	5,660	1.6	7,641	2.1	10,314	2.9
Tunja	1,994	3,411	1.7	4,604	2.3	6,215	3.1
Yopal	924	3,892	4.2	5,253	5.7	7,091	7.7

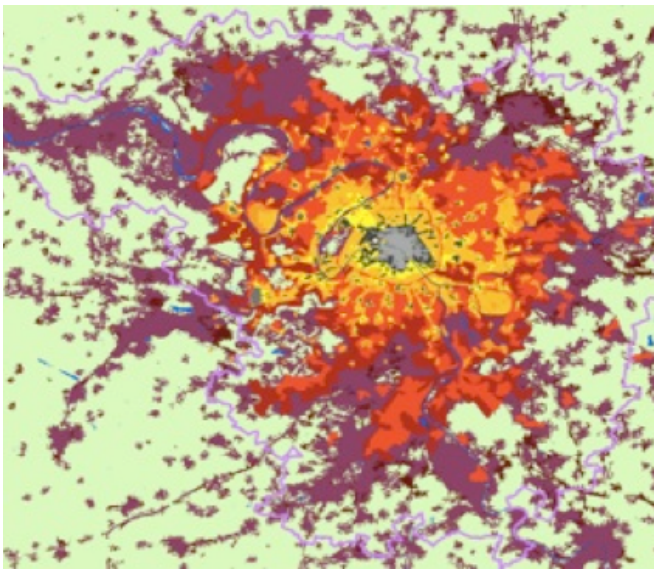
Table 2: Projected increases in the built-up areas of five rapidly growing Colombian cities (Preliminary data), 2010-2040.

growth policies, urban growth boundaries, or compact city regulations—or they can make adequate room for this expansion so that it occurs in an orderly, efficient, equitable, and sustainable way. The *Urban Expansion Initiative* seeks to work with municipalities in Colombia that prefer the second option and are willing to expend both human and financial resources to attain it. It is now calling for selected cities in Colombia—all of them rapidly growing—to join the *Urban Expansion Initiative*, to commit some of their resources, and to obtain additional financial resources if necessary, for this all-important effort. In that sense, this document is an Interim Report, addressed to those involved or interested in the Urban Expansion Initiative, particularly to the Local Authorities and the Municipal Staff of the participant cities and to the representatives of the national, regional and global Institutions with which the Urban Expansion initiative is associated.

In the not too recent past, many cities—Tokyo and Saõ Paolo included—tried to employ the Containment Paradigm at one time or another, failed, and gave it up. They grew too fast to contain themselves effectively. In fact, a representative global sample of 30 cities—including Paris, France, shown in figure 1 (in which the grey area at the center is the built-up area in 1800 and the purple represents the built up periphery of the city in 2000)—increased their built-up areas, on average, by a factor of 16 between 1930 and 2000. They could not have been contained, and all efforts to contain them would have failed. In the few places where containment or partial containment by strong governments has been at least partially successful—such as in Seoul, Korea in the 1970s or in the cities of China in the 1990s and 2000s—it has resulted in choking the urban land supply and putting housing out of reach of most people. In short, failed containment may result in a disorderly, inefficient, inequitable, and unsustainable urban expansion, while successful containment may result in unaffordable housing.

The alternative to the containment paradigm is the *Making Room Paradigm*. This paradigm accepts that urban expansion is inevitable; that if accompanied by

Figure 1: The population of Paris, France, increased 20-fold between 1800 and 2000, while its area grew 200-fold.



economic development it is likely to occur at increased levels of urban area per capita; that it needs to be embraced if residential land supply is to remain plentiful and affordable; and that the land required for public works—at the very minimum the land for an arterial infrastructure grid and the land for a selective hierarchy of public open spaces—needs to be identified and acquired by municipalities in advance of the occupation of the city periphery by urban development.

Figure 2: Ildefons Cerdá's Ensanche Plan for Barcelona, Spain, 1859, expanded its built-up area 9-fold.

There are very few good examples of cities that have prepared adequate lands for their projected expansion. One of the best historical examples is Ildefons Cerdá's *Ensanche* plan of 1859 for Barcelona, Spain (see figure 2), a plan that envisioned no less than a 9-fold expansion of the built-up area of the city. Given the projected rates of expansion of the rapidly growing cities in Colombia, especially that of Yopal, the 9-fold expansion envisioned by Cerdá is not entirely unrealistic.

The proposed *Colombia Urban Expansion Initiative* consists of a simple four-step municipal action program that can and should be implemented now, in advance of the occupation of the urban fringe by formal and informal construction: (1) *Realistic Maps:* preparing maps of the lands that will need to be converted to urban use in the coming thirty years, based on realistic population and urban area per capita projections; (2) *Generous City Limits*: compelling national or departmental authorities to create a single municipal jurisdiction that can execute plans in the entire area for expansion; (3) *Arterial Road Grid*: locating a 25-to-30-meter wide arterial road grid with 1-kilometer spacing throughout the expansion area and transferring the rights-of way for all roads to the municipality; and (4) *Selective Protection of Public Open Spaces:* locating a hierarchy of public open spaces, large and small, throughout the expansion area, and transferring the land rights for all these spaces to the municipality.

Progress To-Date on the Work Program:

Currently, five fast-growing, intermediate Colombian cites are actively involved in the *Colombia Urban Expansion Initiative:* Monteria, Cordoba; Tunja, Boyaca; Valledupar, Cesar; Santa Marta, Magdalena and Yopal, Casanare. This initiative is part of The Urban Expansion Initiative, headed by Dr. Shlomo Angel, author of Planet of Cities [Cambridge MA: Lincoln Institute of Land Policy, 2012], and Senior Research Scholar and Adjunct Professor of Urban Planning at the Urbanization Project in the Stern School of Business at New York University (NYU). The NYU Stern Urbanization Project itself is headed by Professor Paul Romer of the Department of Economics at NYU and is part of a broader cities initiative at NYU—the *Marron Institute of Cities and the Urban Environment*—headed provisionally by Professor Romer, as well. Dr. Angel is being assisted by Jaime Vasconez, NYU Research Scholar and leader of the Colombia Urban Expansion Initiative, and by Nicolas Galarza Sanchez, NYU Junior Research Scholar and coordinator of the initiative.

The Colombia Urban Expansion Initiative is scheduled to take place over the course of 15 months, from April 1st, 2013 through June 30th, 2014. Jaime Vasconez made the initial exploratory visit to two of the selected cities between May and June 2013, and, Nicolas Galarza joined him to visit the other three cities. During those visits, they presented proposals to the municipal authorities, and they obtained from each of the five mayors a signed letter of interest formalizing an engagement of participation (See Annex 1).

Next, Jaime Vasconez and Nicolas Galarza contracted a team of national consultants, experts in specific areas related to urban expansion processes. Those experts

are: German Camargo (Urban environment); Ricardo Montezuma (Mobility and Transport); Carlos Garcia and Angela Hoyos (Legal aspects) and Oswaldo Plata (Municipal engineering and Budgeting). Together, the entire team made second visits to each of the five cities between July and August 2013. During those visits, the team delivered the preliminary studies that had been conducted for each city by the Urban Expansion Initiative. Those studies include maps of the recent urban expansion process, the metrics and calculations of those processes and the maps of the future urban expansion projections given the current tendencies (See Annex 2). In addition, they also delivered to each city copies of the key chapters of Dr. Angel's book Planet of Cities, recently translated to Spanish by University of Rosario Press (Bogota, Colombia), with support of the Lincoln Institute of Land Policy. The Mayors and their Municipal teams each committed to preparing a preliminary version of an urban expansion plan for their cities to be presented at a workshop in Cartagena in September.

Santa Marta Municipal staff presents the Urban Expansion Plan for their city during the Cartagena Workshop.

From September 2nd-4th, 2013, the Mayors, selected municipal senior staff members and the Urban Expansion Initiative's team of experts participated in a 3-day workshop at the Santa Clara Hotel in Cartagena, Colombia. The workshop involved initial presentations from the mayors and from the Initiative's experts. It also included a full day planning exercise in which the municipal teams, supported by the experts, developed a draft urban expansion plans, building on the versions they had prepared in preparation for the workshop. The event also benefited from the presence of delegates from a regional financial entity, the Corporación Andina de Fomento (CAF) and a national urban infrastructure financing entity, the Financiera del Desarrollo Territorial (FINDETER). On behalf of their institutions, the delegates from both organizations expressed interest in the Initiative, explained the conditions and nature of their activities, and confirmed their willingness to provide financial support—in terms of both grants and loans—for the plans of action being developed by the cities. The list of participants and the workshop agenda are included as annexes to this report (See Annex 3 and 4).

The initial presentations by the mayors and their municipal teams described the physical, environmental and socio-economic conditions of their cities, their recent urban growth trends, their current problems, and the contents of the plans and programs currently being executed. Since the approval of the Constitution in 1991, local authorities have been elected rather than appointed. Local governments are now responsible for developing physical plans for their jurisdictions, prescribing the permitted land occupation and use. This is done through official Urban Regulatory Plans, or Planes de Ordenamiento Territorial (POT), that all cities with more than 100,000 inhabitants are required to prepare. However, the power of these plans to affect development decisions are limited, as much land is privately owned and the regulatory framework governing urban development is quite complex.

Four of the five cities participating in the Urban Expansion Initiative already have POTs. Yopal is still preparing its POT because its population just reached 100,000 a few years ago. All of the cities have experienced difficulties in carrying out their plans due to their rapid population growth. Over and above their rapid population growth, their local economies are booming as well, and waves of migrants, as well as refugees fleeing the violence that has plagued the country in recent decades, further accelerate their growth. In most of the participating cities there are informal settlements, the provision of public services is deficient, and there are serious problems with mobility and with urban security.

All of the cities need to expand their urban territory rapidly. The complexity of the legislation governing orderly expansion and the lack of resources for financing for properly planning the expansion areas and providing them with proper public services, however, create significant obstacles for progress, even for the better-equipped and more capable municipalities.

During the workshop, the municipal teams discussed with the experts the legal and administrative constraints they face, the environmental challenges they now confront, as well as issues now hampering progress in their mobility and transport systems. They all prepared preliminary estimates of the size of their expansion areas, including initial calculations and layouts of the arterial road grid needed to service the new areas of urban expansion. They also estimated the costs of the entire process, including the costs of surveying, marking, providing infrastructure networks, and actually building the road network. Following the workshop, the municipal teams agreed to continue to define and survey the proposed hierarchy of open public spaces within their expansion areas.

It was agreed during the Cartagena workshop that further discussion would be needed to clarify, in both conceptual and operational terms, the legal processes that must be followed in order to secure the road network and the hierarchy of open public spaces. Colombian legislation requires that land titles for all plots within the expansion area be verified. The government can place liens on properties, delineating the right-of-way of proposed roads that pass through them. In this context, the lien is an indication on the title document that part of the property is needed for the network of arterial roads or for another public use in the city's expansion area. The legislation pertaining to liens allows for several legal paths to compliance. One option is through negotiation between authorities and landowners. It is anticipated that the landowners will voluntarily donate those parts of their properties affected by the liens to the municipality because the value of the remainder of their land would increase by its proximity to an arterial road. Another option for acquiring the land necessary for arterial roads and other public spaces is through legal seizure, a form of eminent domain. If the landowners will not negotiate, lands can be seized and the landowners compensated. The legislation regarding legal seizure requires that these processes only pertain to areas that will be developed in the near term, within the next five to nine years. For areas that will be developed in the medium- or long-term, the only option is to mark liens on land titles.

Next Steps

In accordance with each city's Urban Expansion Plan of Action, the following actions will need to be completed within the next two years.

Stage 1: Liens

Each Municipality must identify the most efficient legal process for acquiring the lands for the arterial road grid and for the public open spaces. Because the Colombian legislation on land acquisition is complex, each municipality's plan must be detailed and complete. Once the appropriate legal path has been identified, it will be possible to:

- Ensure that there are land titles in the entire expansion area
- When land title registration is incomplete, survey the lands that had previously not been properly surveyed and issue title documents;
- Identify all the properties within the urban expansion area that will be affected by the arterial road network and by the hierarchy of open public spaces;

Overview of the National Workshop for Urban Expansion, Cartagena, Colombia, September 2013

- Mark the liens on all the titles for the portions of land plots needed for the network of arterial roads and for public open spaces.

Stage 2: Engineering and Surveying:

Once the legal procedures for marking the liens on affected land titles are established, municipalities must ensure that liens are registered for the rights-of-way of the arterial road network throughout the expansion area, even though the construction of roads will not take place for many years. Initially, the only civil works required are those needed to mark the rights-of-way for the arterial road grid and the lands required for the hierarchy of public open spaces. In order to accomplish this, municipalities must do the following:

- Decide the width of the arterial roads on the urban fringe;
- Produce a digital map of the city's entire expansion area, including the arterial road grid and the hierarchy of public open spaces;
- Verify the amount of space that the grid and public spaces will occupy;
- Review the draft plan for the arterial roads;
- Calculate the total length of the arterial road network, the magnitudes of the hierarchy of public open spaces and the dimensions of the urban expansion area, as whole;
- Estimate the cost of commissioning an engineering plan for the total arterial road network: hire an engineering firm to verify that the roads can, in fact, be built on their proposed rights-of-way and to identify locations where a wider right-of-way would be needed because of the steeper slopes or where a bridge or tunnel would be needed;
- Estimate the cost of surveying the entire arterial road network and the hierarchy of public open spaces and of putting markers in the ground at 100-meter intervals: hire a surveying firm to do this work based on the plan commissioned from the engineering firm.

Stage 3: Compensation

Once the arterial road grid and the hierarchy of public open spaces have been definitively outlined, the municipalities must determine the cost of ensuring the rights of way and the public use of land. As mentioned before, the Colombian legal framework provides for several legal options to accomplish this, including negotiation and compensated land seizure. In preparation, municipalities will need to:

- Collect data on average land values ($ per square meter) at different locations on the urban fringe;
- Estimate the cost of compensation for each segment of the arterial grid and for the hierarchy of public open spaces;
- Estimate the total cost of compensation for the entire arterial road network and the entire hierarchy of public pen spaces;
- Generate a multi-year compensation plan, based on the cities' available budgets and the amounts that can be paid out in one year;
- Determine if the cost of compensation can be paid out by the deferment of property taxes and, if not, create a compensation fund with a portion of the property taxes collected in the expansion area contributed to that fund; and
- Create and dispense the compensation budget for Year 1, and establish procedures for the multi-year compensation payments.

In parallel, the Urban Expansion Initiative will continue to explore several financial alternatives to fund implementation of the cities' Plans of Action. A first step will be to sign Memorandums of Understanding between the Urban Expansion Initiative and two development banks, Financiera del Desarrollo Territorial (FINDETER) and the Corporación Andina de Fomento (CAF). Eventually, similar agreements will be sought with other national or international financial entities interested in the proposed plans of action.

The Urban Expansion Initiative Team visited the participating cities again in November 2013 to support the municipal teams in finalizing their Plans of Action. Those plans, based on the four-step expansion program, will contain the maps, budgets, procedures and calendars of implementation for the next two years. If needed, the Initiative experts will meet the municipal teams again at the beginning of 2014 to ensure completion of the Plans. The plans will be presented to the development

banks, FINDETER and/or CAF, and to the Colombian National Government, through the National Planning Department, in order to obtain the financial resources needed for implementation before the end of the current mayors' administrative periods.

The NYU Stern Urbanization Project has made funds available to carry out the following proposed activities, a number of which have already been implemented:

- Preparation of initial documentation for the proposed initiative;
- Preparation of population projections for participating cities, 2000 to 2050;
- Preparation of historical urban expansion maps for the last 3 dates for participating cities, 1985, 1995, and 2010;
- Preparation of urban expansion projections in participating cities, 2000 to 2050;
- Payment for the Initiative's project staff, both in New York and in Colombia;
- Coordination of and financing for the workshop in Cartagena, attended by the Initiative's staff, central government officials, regional officials, and municipal officials;
- Visits by the Initiative's staff to participating cities at regular intervals to help with program activities;
- Preparation, coordination, and financing of a monitoring system in each of the participating cities;
- Assistance in implementation procedures for urban expansion plans in participating cities;
- Provision of partial financial assistance to personnel involved in the monitoring program;
- Assistance in translating selected chapters of *Planet of Cities* into Spanish as a textbook for the Cartagena workshop;
- Assistance in the preparation of detailed case studies in two of the participating cities for presentation at the World Urban Forum in Medellin, Colombia, in April 2014; and
- Assistance in videotaping implementation in one selected city as part of the project monitoring program.

These activities will be financed by the NYU Stern Urbanization Project, at no expense to the municipalities or to the Colombian government. That said, municipalities that decide to engage in the four-point program to make room for their expansion will be expected to commit or to secure adequate funds in order to implement it. These funds may be from grants, from their own resources, from FINDETER or CAF, from national and departmental governments, or from other resources.

An additional aspect worth mentioning is that the Plans of Action for Urban Expansion in the five Colombian cities, and in the four Ethiopian cities where a similar process is being executed, will be presented at a networking event at the World Urban Forum, to be held in Medellin, Colombia, April 5 - 11, 2014. To that end, the Urban Expansion Initiative has presented a proposal to the organizers of the World Urban Forum. That networking event could also provide an opportunity to launch the Spanish version of *Planet of Cities*.

The National Workshop for Urban Expansion: Cartegena, Colombia, September 2013

URBAN EXPANSION

APPENDIX 1:

Letters of Intention Signed by the Mayors of Five Colombian Cities

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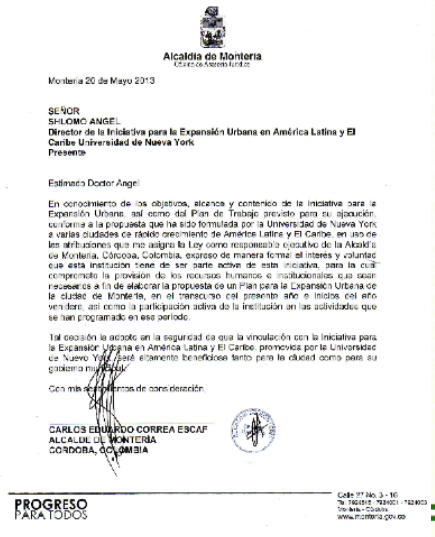
Letters of Intention Signed by the Mayors of Five Colombian Cities:



Alcaldía de Montería

Montería 20 de Mayo 2013

SEÑOR
SHLOMO ANGEL
Director de la Iniciativa para la Expansión Urbana en América Latina y El Caribe Universidad de Nueva York
Presente

Estimado Doctor Angel:

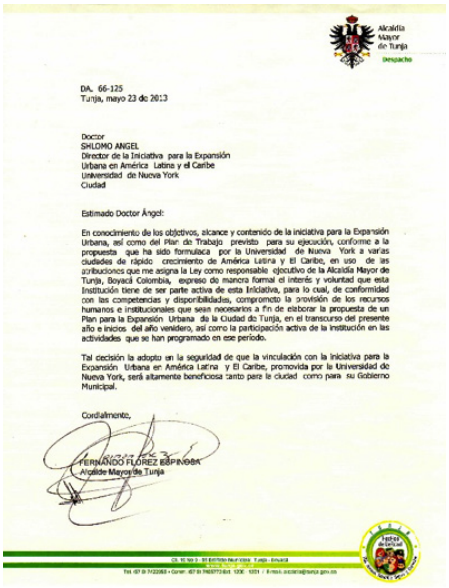
En conocimiento de los objetivos, alcance y contenido de la iniciativa para la Expansión Urbana, así como del Plan de Trabajo previsto para su ejecución, conforme a la propuesta que ha sido formulada por la Universidad de Nueva York a varias ciudades de rápido crecimiento de América Latina y El Caribe, en uso de las atribuciones que me asigna la Ley como responsable ejecutivo de la Alcaldía de Montería, Córdoba, Colombia, expreso de manera formal el interes y voluntad que esta institución tiene de ser parte activa de esta iniciativa, para la cual comprometo la provisión de los recursos humanos e institucionales que sean necesarios a fin de elaborar la propuesta de un Plan para la Expansión Urbana de la ciudad de Montería, en el transcurso del presente año e inicios del año venidero, así como la participación activa de la institución en las actividades que se han programado en ese periodo.

Tal decisión la adopto en la seguridad de que la vinculación con la iniciativa para la Expansión Urbana en América Latina y El Caribe, promovida por la Universidad de Nueva York, será altamente beneficiosa tanto para la ciudad como para su gobierno municipal.

Con mis sentimientos de consideración.

CARLOS EDUARDO CORREA ESCAF
ALCALDE DE MONTERIA
CORDOBA, COLOMBIA

PROGRESO PARA TODOS



Alcaldía Mayor de Tunja
Despacho

DA. 66-125
Tunja, mayo 23 de 2013

Doctor
SHLOMO ANGEL
Director de la Iniciativa para la Expansión Urbana en América Latina y el Caribe
Universidad de Nueva York
Ciudad

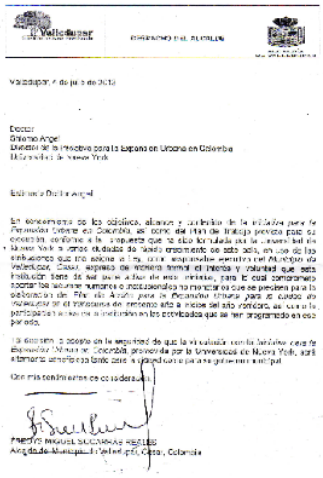
Estimado Doctor Ángel:

En conocimiento de los objetivos, alcance y contenido de la iniciativa para la Expansión Urbana, así como del Plan de Trabajo previsto para su ejecución, conforme a la propuesta que ha sido formulada por la Universidad de Nueva York a varias ciudades de rápido crecimiento de América Latina y El Caribe, en uso de las atribuciones que me asigna la Ley como responsable ejecutivo de la Alcaldía Mayor de Tunja, Boyacá Colombia, expreso de manera formal el interés y voluntad que esta Institución tiene de ser parte activa de esta Iniciativa, para lo cual, de conformidad con las competencias y disponibilidades, comprometo la provisión de los recursos humanos e institucionales que sean necesarios a fin de elaborar la propuesta de un Plan para la Expansión Urbana de la Ciudad de Tunja, en el transcurso del presente año e inicios del año venidero, así como la participación activa de la institución en las actividades que se han programado en ese periodo.

Tal decisión la adopto en la seguridad de que la vinculación con la iniciativa para la Expansión Urbana en América Latina y El Caribe, promovida por la Universidad de Nueva York, será altamente beneficiosa tanto para la ciudad como para su Gobierno Municipal.

Cordialmente,

FERNANDO FLOREZ BRAÑOSA
Alcalde Mayor de Tunja



Valledupar, 4 de julio de 2013

Doctor
Shlomo Angel
Director de la Iniciativa para la Expansión Urbana en Colombia
Universidad de Nueva York

Estimado Doctor Angel

En conocimiento de los objetivos, alcance y contenido de la iniciativa para la Expansión Urbana en Colombia, así como del Plan de Trabajo previsto para su ejecución, conforme a la propuesta que se ha sido formulada por la Universidad de Nueva York a varias ciudades de rápido crecimiento de este país, en uso de las atribuciones que me asigna la Ley, como responsable ejecutivo del Municipio de Valledupar, Cesar, expreso de manera formal el interés y voluntad que esta Institución tiene de ser parte activa de esta iniciativa, para lo cual comprometo aportar los recursos humanos e institucionales no monetarios que se precisen para la elaboración del Plan de Acción para la Expansión Urbana para la ciudad de Valledupar en el transcurso del presente año e inicios del año venidero, así como la participación activa de la institución en las actividades que se han programado en ese periodo.

Tal decisión la adopto en la seguridad de que la vinculación con la iniciativa para la Expansión Urbana en Colombia, promovida por la Universidad de Nueva York, será altamente beneficiosa tanto para la ciudad como para su gobierno municipal.

Con mis sentimientos de consideración,

FREDYS MIGUEL SUCARRAS REALES
Alcalde de Municipio de Valledupar, Cesar, Colombia

SISTEMA INTEGRADO DE GESTION
PROCESO GESTION DOCUMENTAL
COMUNICACION OFICIAL

MYI 00.53 333
Yopal, Junio 24 de 2013

CARTA DE INTERÉS

Señor Doctor
SHLOMO ANGEL
Director de la Iniciativa para la Expansión Urbana en Colombia
Universidad de Nueva York
Estados Unidos

Distinguido Doctor Angel,

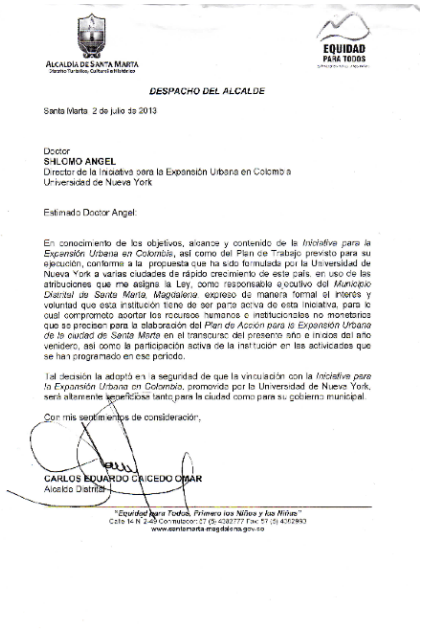
En conocimiento de los objetivos, alcance y contenido de la *Iniciativa para la Expansión Urbana en Colombia*, así como del Plan de Trabajo previsto para su ejecución, conforme a la propuesta que ha sido formulada por la Universidad de Nueva York a varias ciudades de rápido crecimiento de este país, en uso de las atribuciones que me asigna la Ley, como responsable ejecutivo del Gobierno de Cuidad de Yopal, Casanare, expreso de manera formal el interés y voluntad que esta institución tiene de ser parte activa de esta Iniciativa, para lo cual se dispuesto dar inicio a las acciones pertinentes que conlleven a obtener una propuesta relativa a la elaboración del Plan de Acción para la Expansión Urbana para la ciudad de Yopal, considerando necesario el desarrollo de una reunión en la cual se establezcan los propósitos principales y los compromisos de parte del municipio para el logro de los fines propuestos.

Tal decisión le adopto en la seguridad de que la vinculación con la *Iniciativa para la Expansión Urbana en Colombia*, promovida por la Universidad de Nueva York, sera altamente beneficiosa tanto para la ciudad como para el gobierno municipal.

Con mis sentimientos de consideración y aprecio,

WILLMAN ENRIQUE CELEMIN CACERES
Alcalde de Yopal - Casanare

ALCALDÍA MUNICIPAL DE YOPAL



ALCALDIA DE SANTA MARTA

EQUIDAD PARA TODOS

DESPACHO DEL ALCALDE

Santa Marta 2 de julio de 2013

Doctor
SHLOMO ANGEL
Director de la Iniciativa para la Expansión Urbana en Colombia
Universidad de Nueva York

Estimado Doctor Angel:

En conocimiento de los objetivos, alcance y contenido de la *Iniciativa para la Expansión Urbana en Colombia*, así como del Plan de Trabajo previsto para su ejecución, conforme a la propuesta que ha sido formulada por la Universidad de Nueva York a varias ciudades de rápido crecimiento de este país, en uso de las atribuciones que me asigna la Ley, como responsable ejecutivo del *Municipio Distrital de Santa Marta, Magdalena*, expreso de manera formal el interés y voluntad que esta institución tiene de ser parte activa de esta iniciativa, para lo cual comprometo aportar los recursos humanos e institucionales no monetarios que se precisen para la elaboración del *Plan de Acción para la Expansión Urbana de la ciudad de Santa Marta* en el transcurso del presente año e inicios del año venidero, así como la participación activa de la institución en las actividades que se han programado en ese periodo.

Tal decisión la adoptó en la seguridad de que la vinculación con la *Iniciativa para la Expansión Urbana en Colombia*, promovida por la Universidad de Nueva York, será altamente beneficiosa tanto para la ciudad como para su gobierno municipal.

Con mis sentimientos de consideración,

CARLOS EDUARDO CAICEDO OMAR
Alcalde Distrital

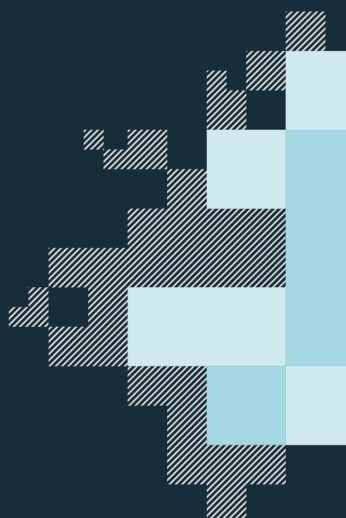
"Equidad para Todos, Primero los Niños y las Niñas"
Calle 14 N 2-49 Conmutador 57 (5) 4382777 Fax 57 (5) 4362893
www.santamarta.magdalena.gov.co

URBAN EXPANSION

APPENDIX 2:

Analyzing Recent Urban Expansion Trends in Five Colombian Cities

NYU STERN | URBANIZATION PROJECT

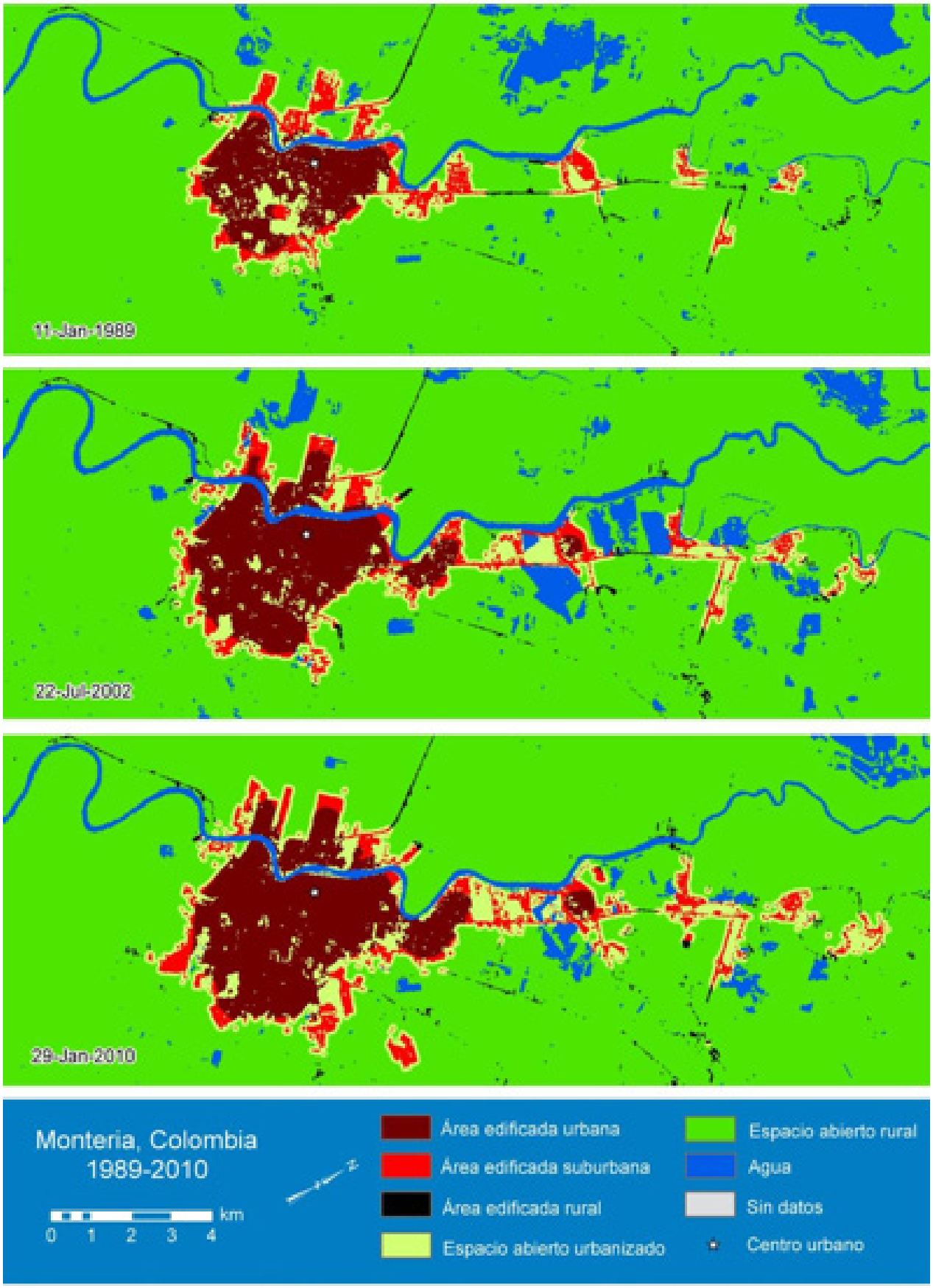


Analyzing Recent Urban Expansion Trends in Five Colombian Cities

In this appendix, we present the results of the analysis of historical urban expansion in the five participating Colombian cities, based on the classification of satellite imagery and on population data for the past three census dates: 1985, 1995 and 2010. Projections of the estimated areas of expansion in these cities are then presented as well. Anna Chabaeva classified Landsat satellite imagery with 30-meter pixel resolution in each city for the three census dates. Given these initial classifications, Jason Parent created the maps and calculated their associated metrics. These maps, in association with preliminary population projections, were then use to project areas of expansion in each city, based on several assumptions regarding the projected change in urban area per person in the coming years. These projection maps will be revised once new and more rigorous population projections, now being prepared by Mark Montgomery, become available.

In the pages that follow, there is a two–page spread for each of the five cities selected describing their historical expansion. The first page of each spread shows three maps corresponding to the last three census dates (1985, 1995, 2010). The second page displays numerical values for various metrics describing specific characteristics of these maps. Following these two-page spreads, there are maps of the expected expansion in the participating cities to 2040.

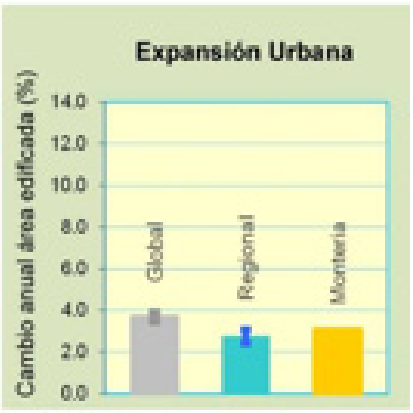
Monteria

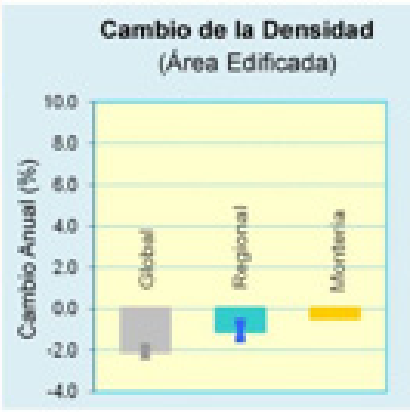

11-Jan-1989
22-Jul-2002
29-Jan-2010
Monteria, Colombia
1989-2010
km
0 1 2 3 4
Área edificada urbana
Área edificada suburbana
Área edificada rural
Espacio abierto urbanizado
Espacio abierto rural
Agua
Sin datos
Centro urbano

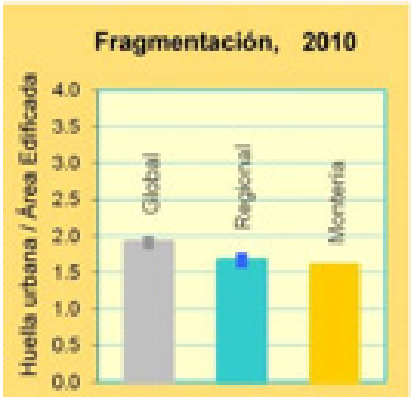
Monteria

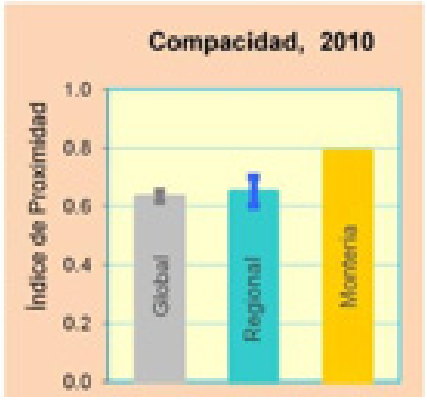
Monteria, Colombia (América Latina y El Caribe)

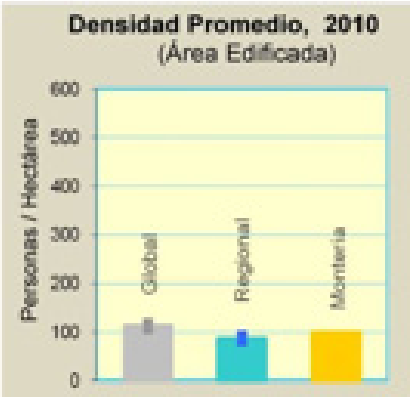
Métrica	Jan. 15, 1989	Jul. 15, 2002	Jan. 15, 2010	Cambio Anual (Porcentaje)
Población	185,340	264,979	323,214	2.6
Área Edificada (Hectáreas)				
Total	1,648	2,583	3,257	3.1
Urbana	867	1,611	2,003	2.9
Suburbana	560	641	852	3.8
Rural	222	331	402	2.6
Espacio Abierto (Hectáreas)				
Espacio Abierto Urbanizado	1,034	1,387	1,957	4.6
Huella Urbana	2,682	3,970	5,214	3.6
Densidad (Personas / Hectáreas)				
Densidad del Área Edificada	112.4	102.6	99.2	-0.4
Densidad de la Huella Urbana	69.1	66.7	62.0	-1.0
Fragmentación				
Huella Urbana / Área Edificada	1.63	1.54	1.60	0.50
Índice de Apertura	0.46	0.38	0.37	-0.40
Compacidad (Redondez)				
Proximidad	0.87	0.77	0.79	0.30
Cohesión	0.86	0.75	0.77	0.40
Nuevo Desarrollo (Hectáreas)				
Relleno		272	151	-7.8
Extensión		321	246	-3.5
Discontinuidad		150	87	-7.3



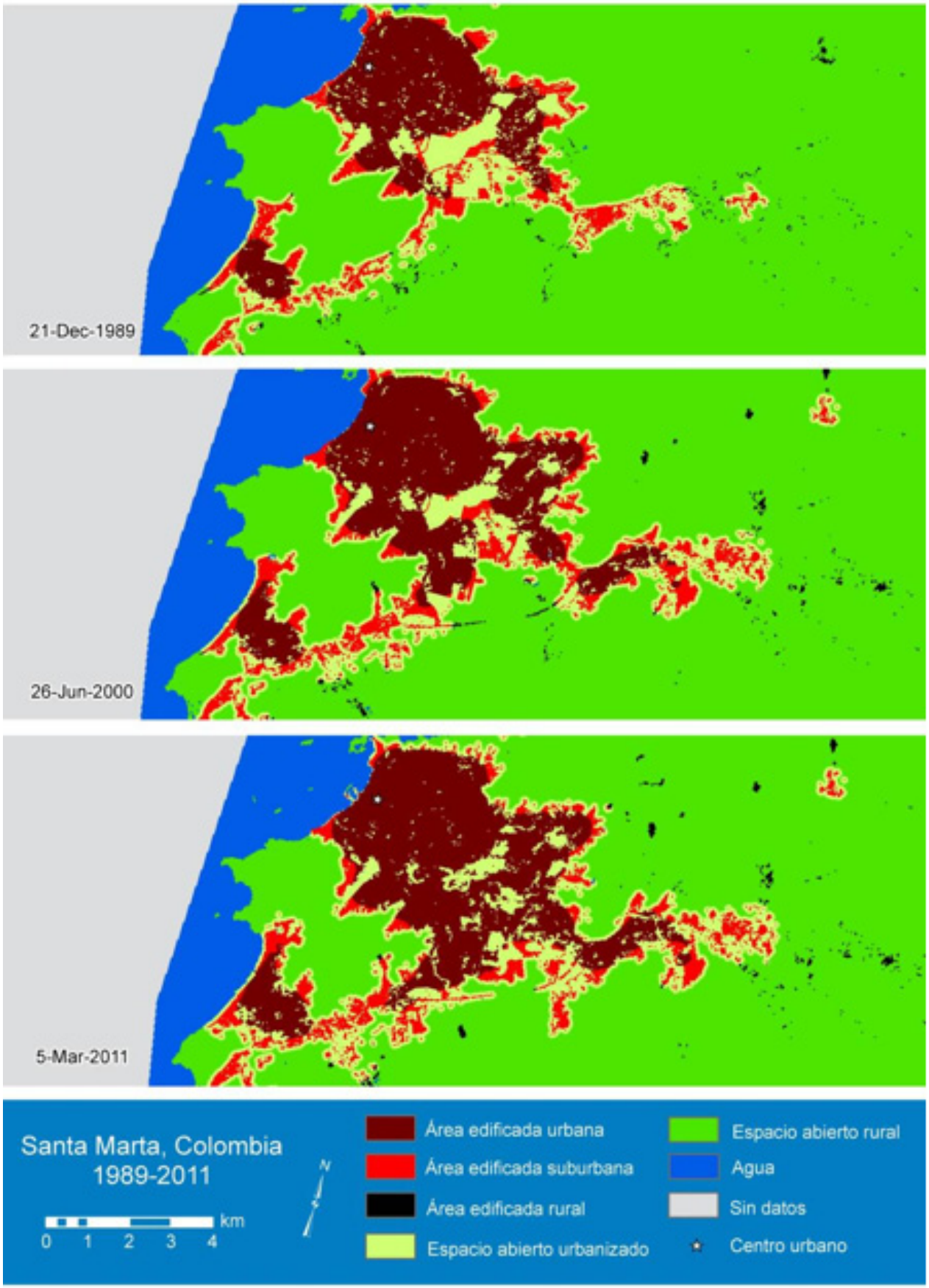








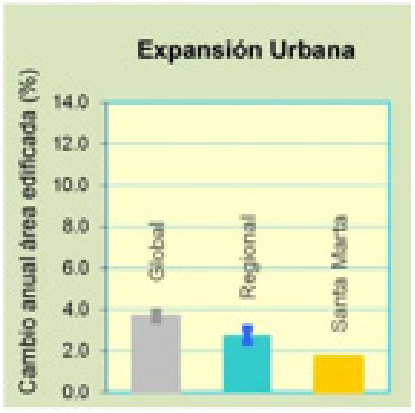
Santa Marta

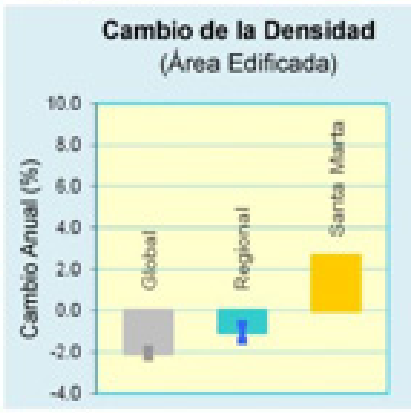

21-Dec-1989
26-Jun-2000
5-Mar-2011
Santa Marta, Colombia
1989-2011
km
0 1 2 3 4
N
Área edificada urbana
Área edificada suburbana
Área edificada rural
Espacio abierto urbanizado
Espacio abierto rural
Agua
Sin datos
Centro urbano

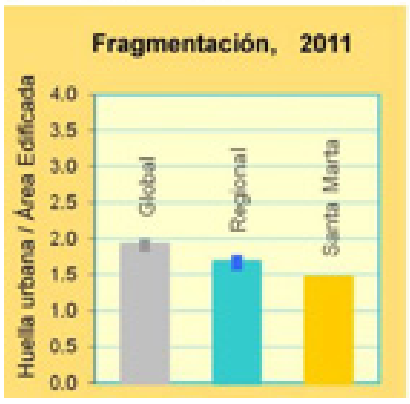
Santa Marta

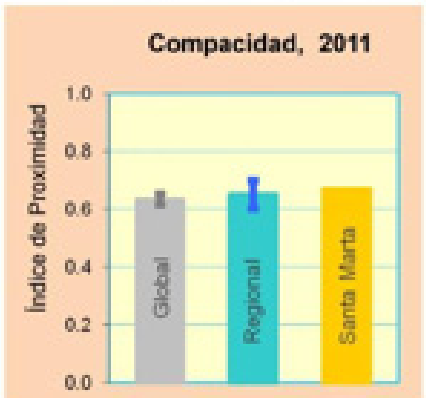
Santa Marta, Colombia (América Latina y El Caribe)

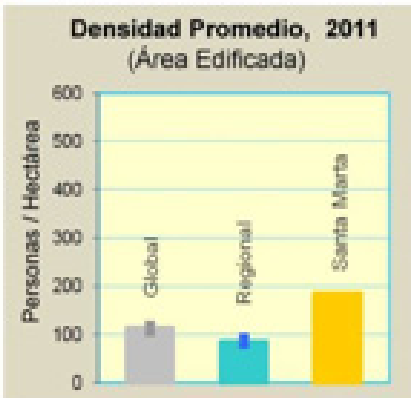
Métrica	Dec. 21, 1989	Jun. 26, 2000	Mar. 5, 2011	Cambio Anual (Porcentaje)
Población	240,560	330,878	457,425	4.3
Área Edificada (Hectáreas)				
Total	1,548	2,165	2,457	1.7
Urbana	1,112	1,664	2,001	2.5
Suburbana	416	474	430	-1.3
Rural	19	27	26	-0.5
Espacio Abierto (Hectáreas)				
Espacio Abierto Urbanizado	989	1,049	1,138	1.1
Huella Urbana	2,516	3,214	3,595	1.5
Densidad (Personas / Hectáreas)				
Densidad del Área Edificada	155.4	152.8	186.2	2.6
Densidad de la Huella Urbana	95.6	102.9	127.2	2.8
Fragmentación				
Huella Urbana / Área Edificada	1.63	1.48	1.46	-0.19
Índice de Apertura	0.35	0.32	0.30	-0.86
Compacidad (Redondez)				
Proximidad	0.83	0.60	0.67	1.47
Cohesión	0.82	0.60	0.66	1.27
Nuevo Desarrollo (Hectáreas)				
Relleno		207	118	-7.5
Extensión		316	103	-14.9
Discontinuidad		35	43	2.7



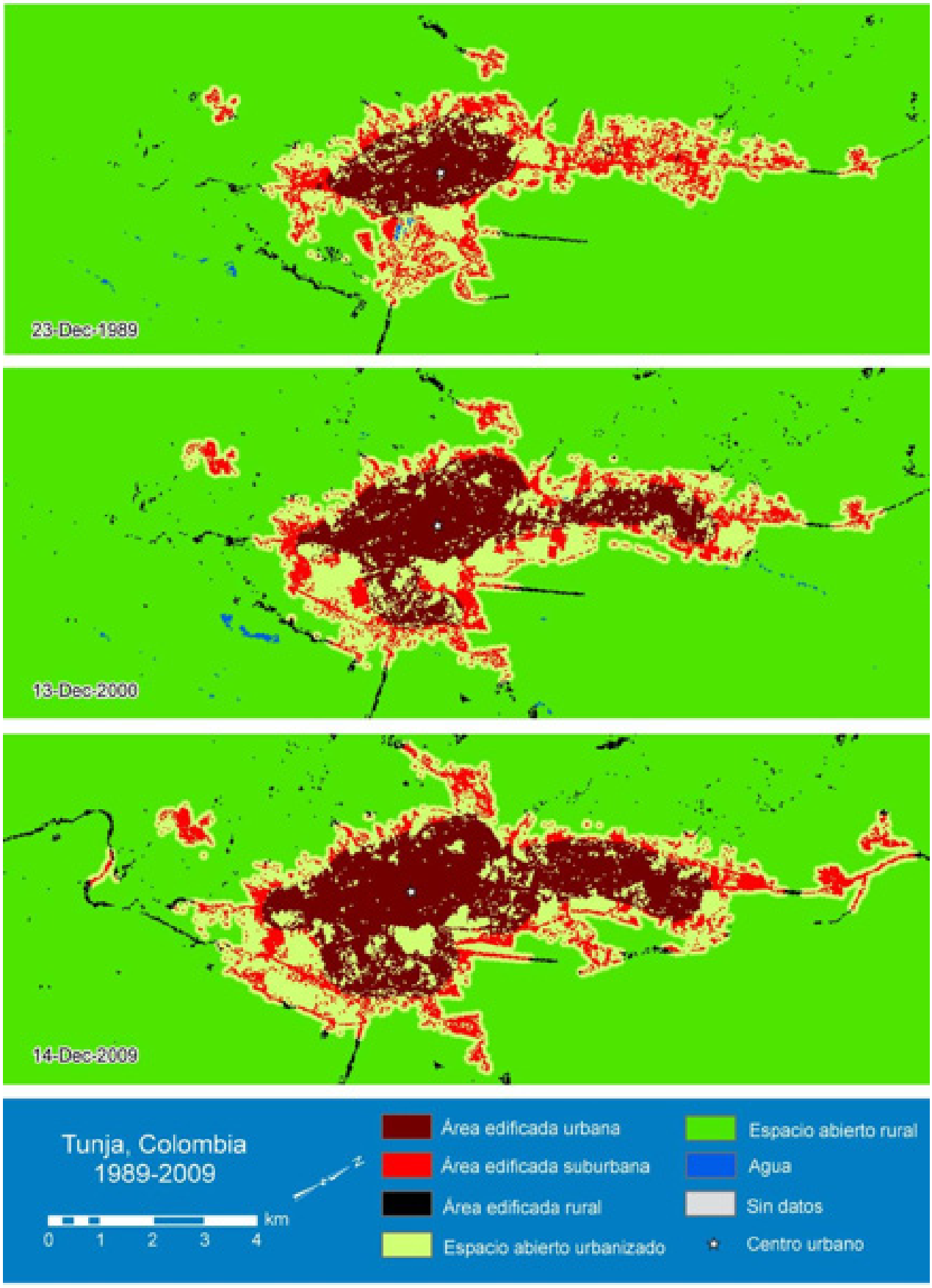






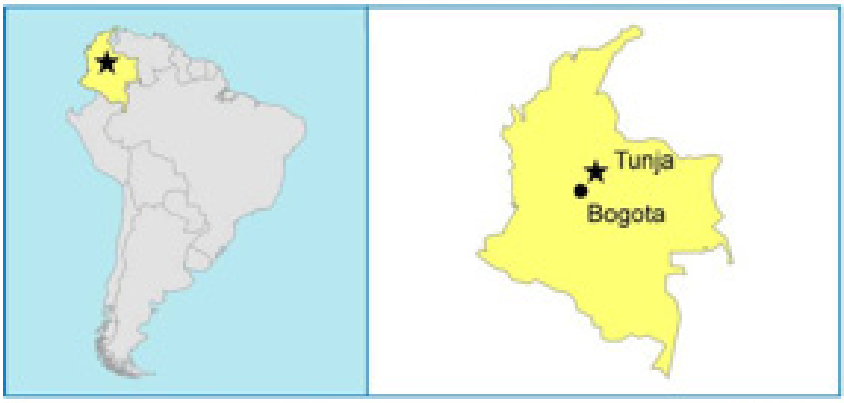


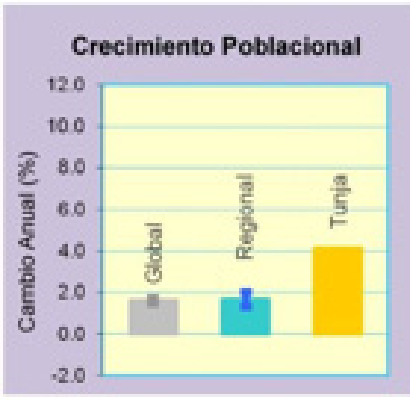
Tunja


23-Dec-1989
13-Dec-2000
14-Dec-2009
Tunja, Colombia
1989-2009
km
0 1 2 3 4
Área edificada urbana
Área edificada suburbana
Área edificada rural
Espacio abierto urbanizado
Espacio abierto rural
Agua
Sin datos
Centro urbano

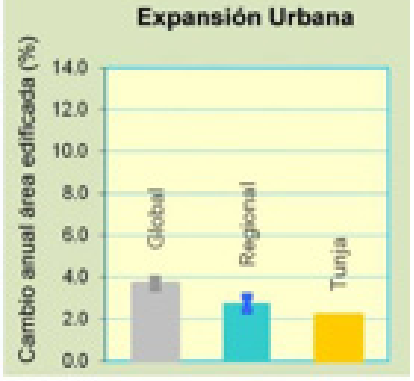
Tunja

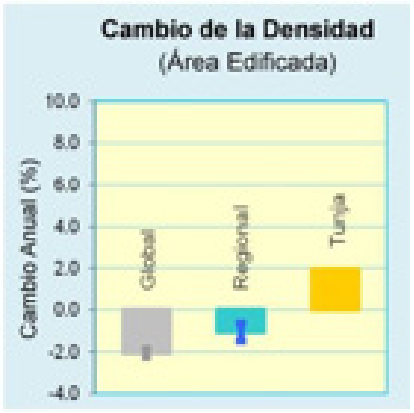
Tunja, Colombia (América Latina y El Caribe)

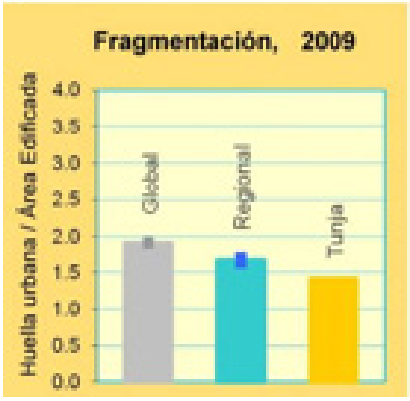


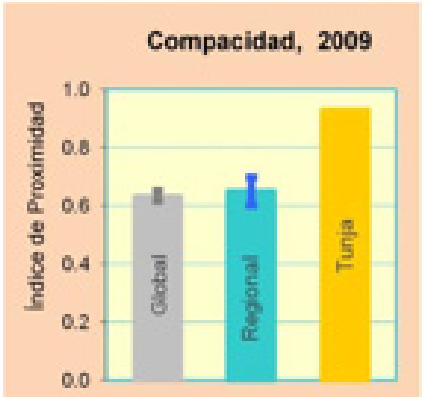


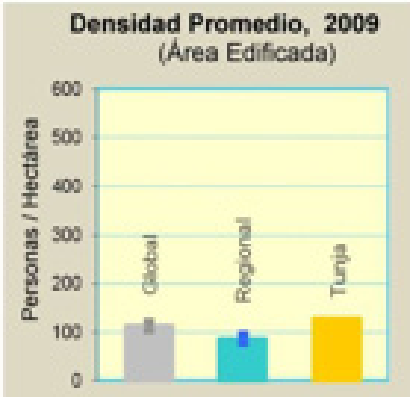
Métrica	Dec. 15, 1989	Dec. 15, 2000	Dec. 15, 2009	Cambio Anual (Porcentaje)
Población	90,043	127,167	168,630	3.8
Área Edificada (Hectáreas)				
Total	921	1,297	1,684	3.5
Urbana	397	828	1,229	5.3
Suburbana	471	414	418	0.1
Rural	52	55	38	-5.1
Espacio Abierto (Hectáreas)				
Espacio Abierto Urbanizado	1,012	1,158	1,278	1.3
Huella Urbana	1,933	2,455	2,962	2.5
Densidad (Personas / Hectáreas)				
Densidad del Área Edificada	97.8	98.0	100.1	0.3
Densidad de la Huella Urbana	46.6	51.8	56.9	1.3
Fragmentación				
Huella Urbana / Área Edificada	2.10	1.89	1.76	-0.98
Índice de Apertura	0.51	0.43	0.37	-2.00
Compacidad (Redondez)				
Proximidad	0.69	0.77	0.81	0.67
Cohesión	0.69	0.77	0.80	0.51
Nuevo Desarrollo (Hectáreas)				
Relleno		214	205	-0.6
Extensión		86	103	2.5
Discontinuidad		40	41	0.3



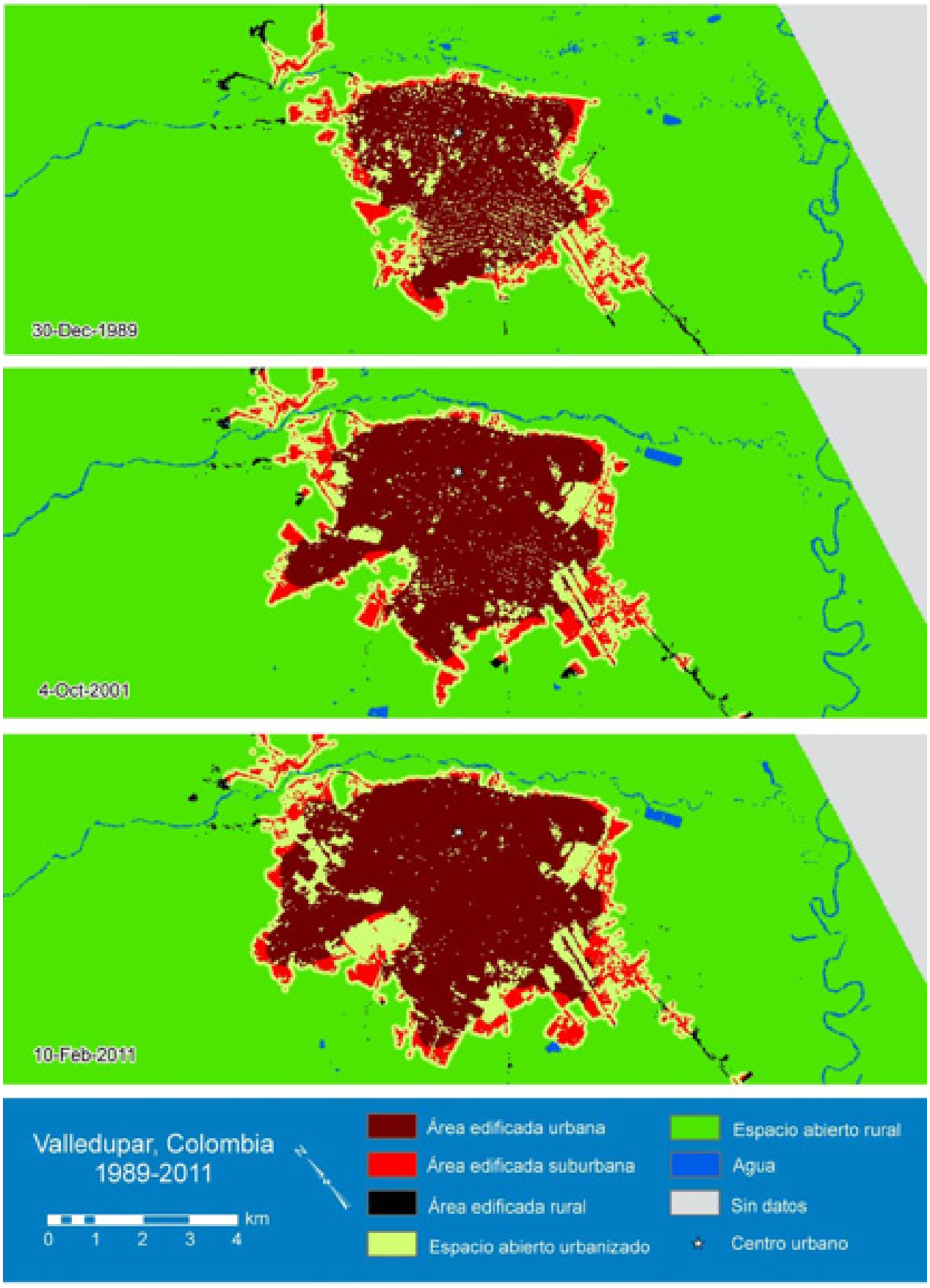








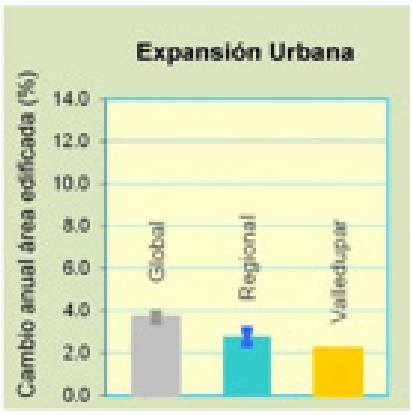
Valledupar

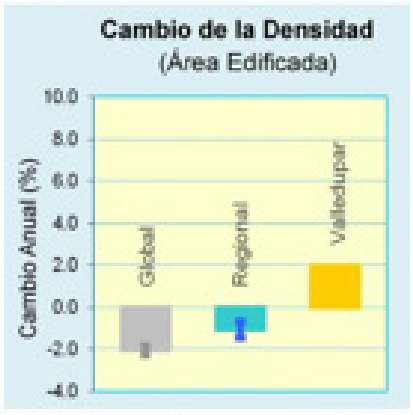

30-Dec-1989
4-Oct-2001
10-Feb-2011
Valledupar, Colombia
1989-2011
km
0 1 2 3 4
N
Área edificada urbana
Área edificada suburbana
Área edificada rural
Espacio abierto urbanizado
Espacio abierto rural
Agua
Sin datos
Centro urbano

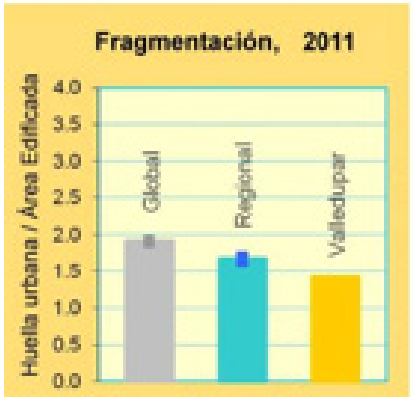
Valledupar

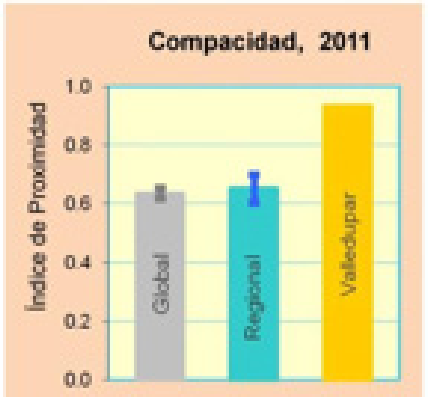
Valledupar, Colombia (América Latina y El Caribe)

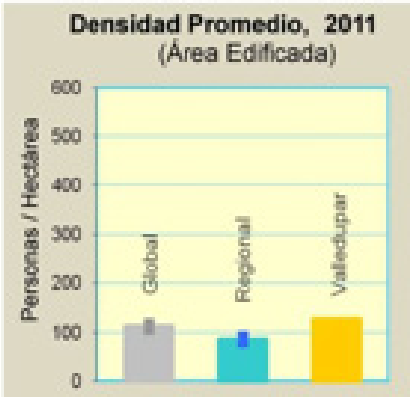
Métrica	Dec. 15, 1989	Oct. 15, 2001	Feb. 11, 2011	Cambio Anual (Porcentaje)
Población	178,452	264,366	359,951	4.1
Área Edificada (Hectáreas)				
Total	1,655	2,392	2,816	2.2
Urbana	1,285	1,923	2,334	2.6
Suburbana	312	398	422	0.8
Rural	58	71	60	-2.2
Espacio Abierto (Hectáreas)				
Espacio Abierto Urbanizado	866	990	1,166	2.2
Huella Urbana	2,521	3,382	3,982	2.2
Densidad (Personas / Hectáreas)				
Densidad del Área Edificada	107.8	110.5	127.8	1.9
Densidad de la Huella Urbana	70.8	78.2	90.4	1.9
Fragmentación				
Huella Urbana / Área Edificada	1.52	1.41	1.41	0.00
Índice de Apertura	0.33	0.27	0.25	-1.03
Compacidad (Redondez)				
Proximidad	0.90	0.91	0.93	0.29
Cohesión	0.89	0.91	0.92	0.15
Nuevo Desarrollo (Hectáreas)				
Relleno		226	109	-9.7
Extensión		378	260	-5.0
Discontinuidad		61	15	-18.7



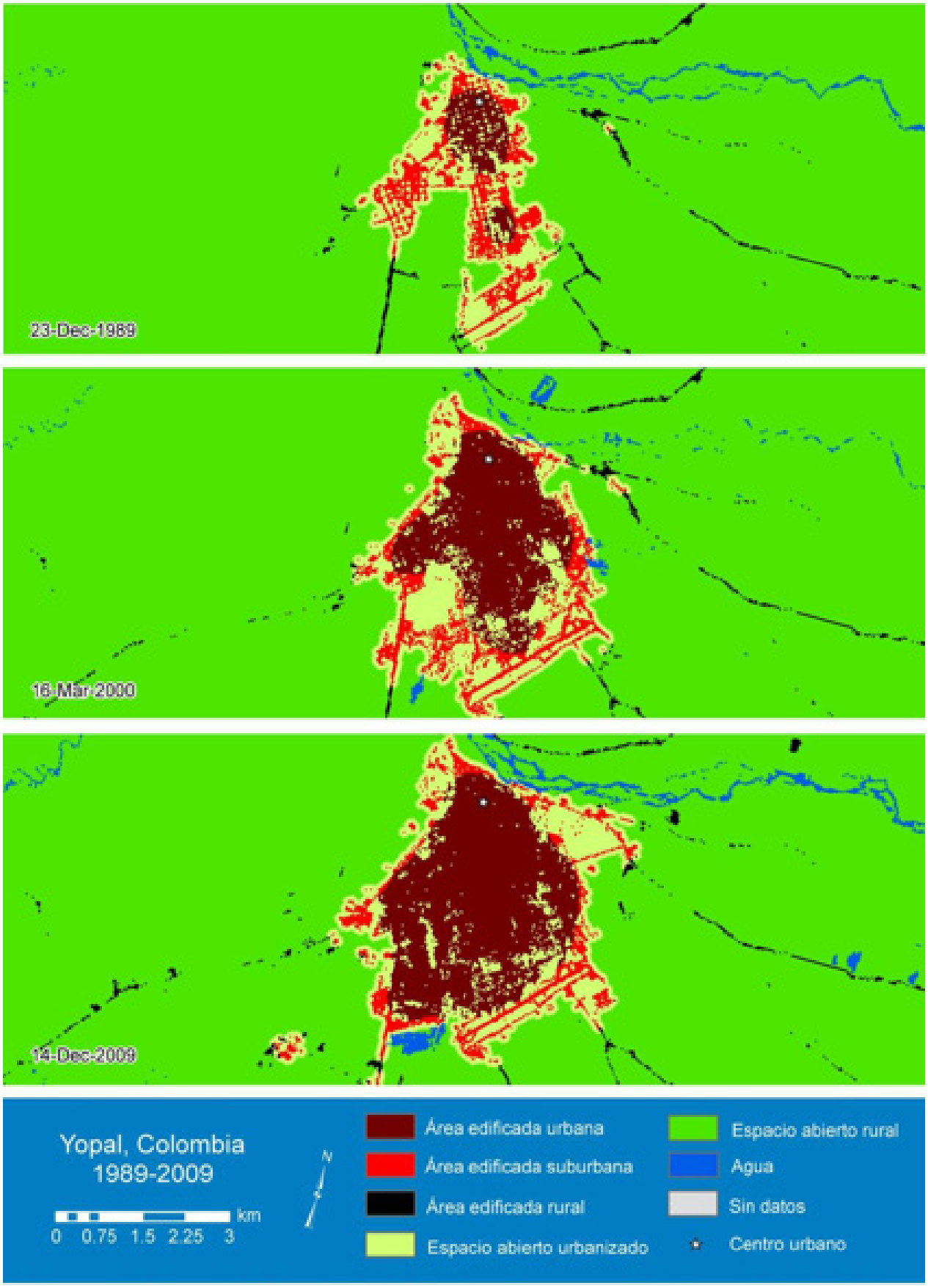






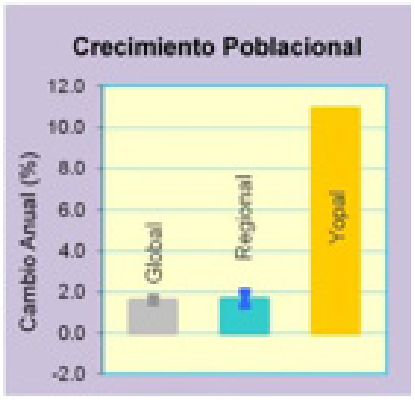


Yopal

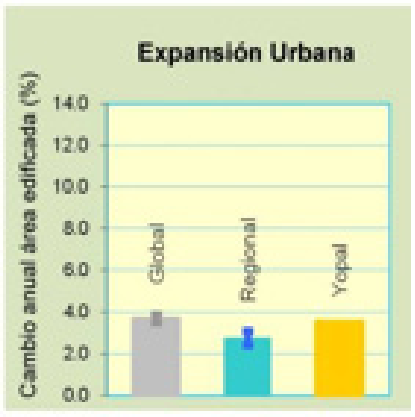

23-Dec-1989
16-Mar-2000
14-Dec-2009
Yopal, Colombia
1989-2009
km
0 0.75 1.5 2.25 3
N
Área edificada urbana
Área edificada suburbana
Área edificada rural
Espacio abierto urbanizado
Espacio abierto rural
Agua
Sin datos
Centro urbano

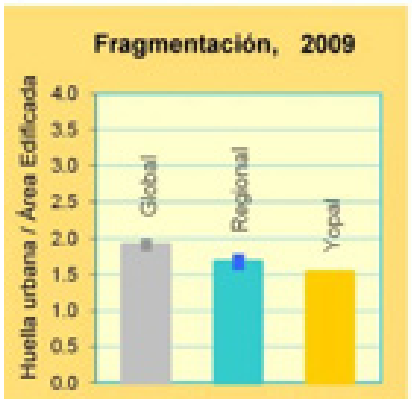
Yopal

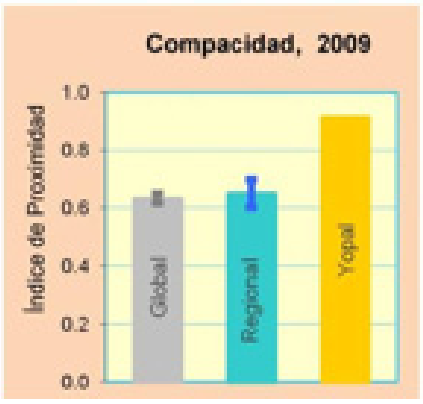
Yopal, Colombia (América Latina y El Caribe)

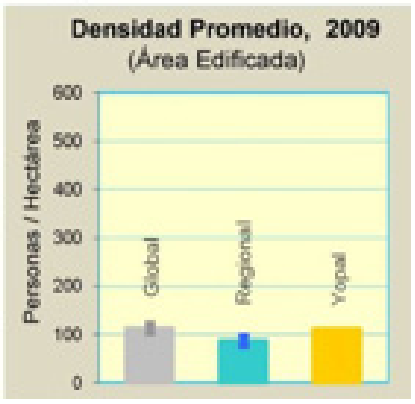


Métrica	Dec. 15, 1989	Mar. 15, 2000	Dec. 15, 2009	Cambio Anual (Porcentaje)
Población	24,483	57,853	131,189	10.9
Área Edificada (Hectáreas)				
Total	435	905	1,178	3.5
Urbana	121	585	917	6.0
Suburbana	237	257	203	-3.1
Rural	77	63	58	-1.1
Espacio Abierto (Hectáreas)				
Espacio Abierto Urbanizado	473	644	620	-0.5
Huella Urbana	908	1,549	1,798	2.0
Densidad (Personas / Hectáreas)				
Densidad del Área Edificada	56.3	63.9	111.4	7.4
Densidad de la Huella Urbana	27.0	37.3	73.0	8.9
Fragmentación				
Huella Urbana / Área Edificada	2.09	1.71	1.53	-1.53
Índice de Apertura	0.63	0.39	0.31	-3.06
Compacidad (Redondez)				
Proximidad	0.83	0.97	0.91	-0.85
Cohesión	0.83	0.97	0.92	-0.71
Nuevo Desarrollo (Hectáreas)				
Relleno		149	171	1.8
Extensión		241	57	-19.2
Discontinuidad		33	19	-7.4









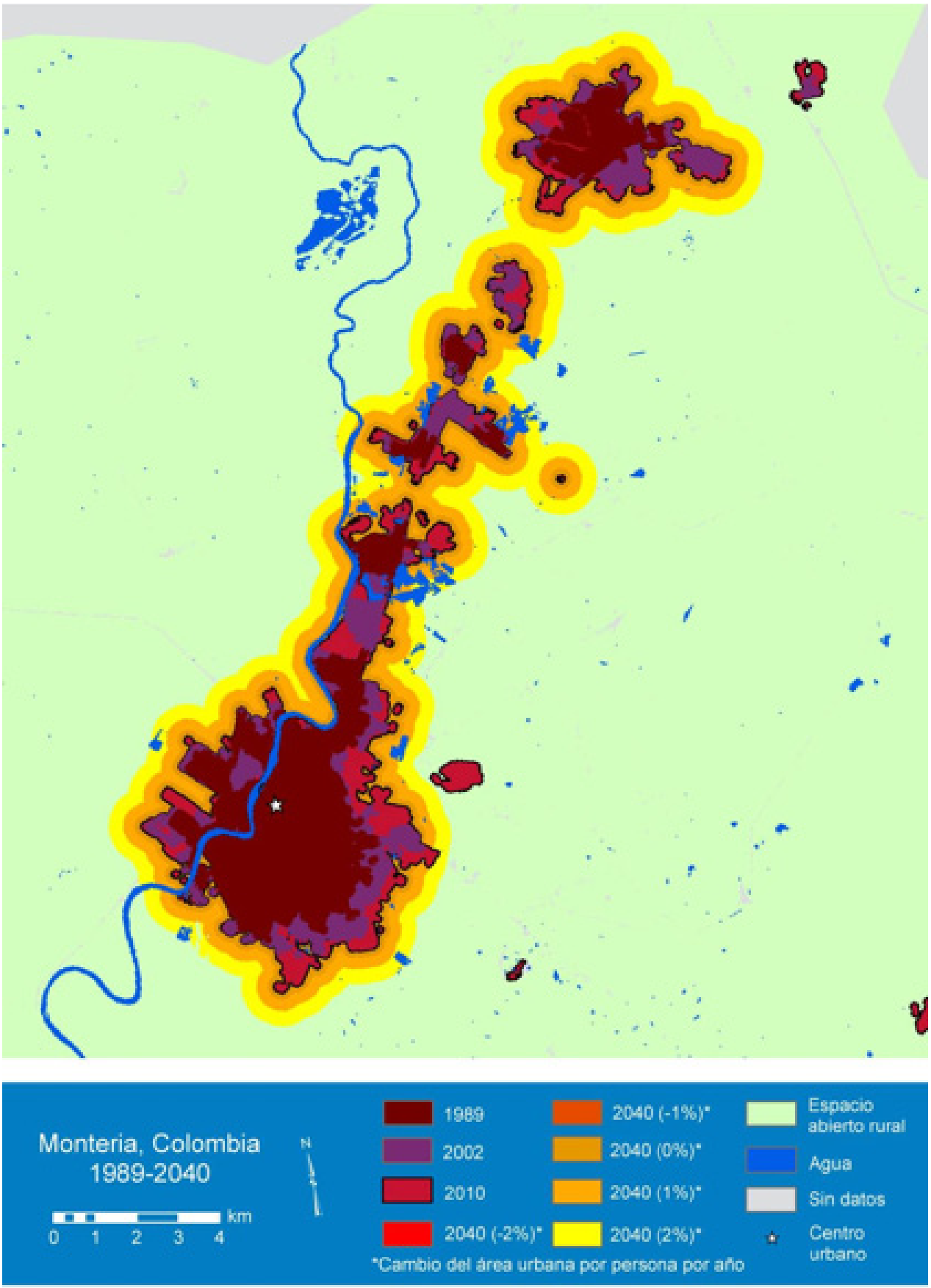
Projecting Urban Expansion in Colombian Cities to 2040

The built-up areas of the five Colombian cities detected in the classification of satellite imagery, preliminary population projections, and five possible scenarios regarding possible changes in city area per person were used to project urban expansion in these cities to the year 2040. These projections are summarized in table 3 bellow, followed by maps for the five cities showing their projected areas of expansion between 2010 an 2040.

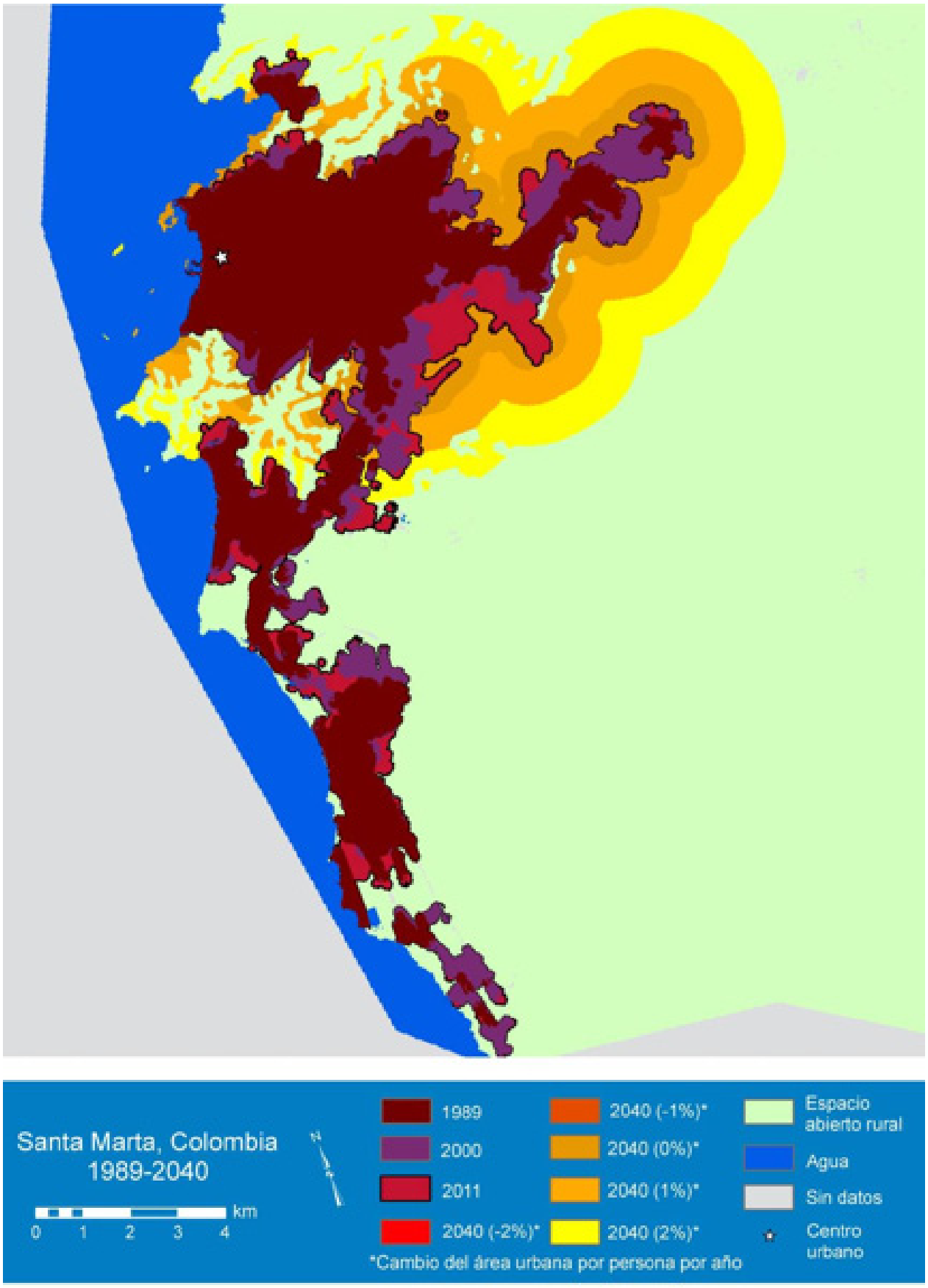
CITY	LANDSAT BUILT-UP AREA IN 2010 (HECTARES)	BUILT-UP AREA DENSITY IN 2010 (PERSONS PER HECTARE)	CITY AREA IN 2010 (ESTIMATE BASED ON 1.5 ITS BUILT-UP AREA)	CITY AREA PER PERSON IN 2010: BUILT –UP AREA PER PERSON (SQ. M.)*1.5	PROJECTED CITY AREA IN 2040 (HECTARES)									
					2% DECREASE IN CITY AREA PER PERSON PER YEAR		1% DECREASE IN CITY AREA PER PERSON PER YEAR		NO DECREASE OR INCREASE IN CITY AREA PER PERSON PER YEAR		1% INCREASE IN CITY AREA PER PERSON PER YEAR		2% INCREASE IN CITY AREA PER PERSON PER YEAR	
					CITY AREA IN 2040	AS MULTIPLE OF CITY AREA IN 2010	CITY AREA IN 2040	AS MULTIPLE OF CITY AREA IN 2010	CITY AREA IN 2040	AS MULTIPLE OF CITY AREA IN 2010	CITY AREA IN 2040	AS MULTIPLE OF CITY AREA IN 2010	CITY AREA IN 2040	AS MULTIPLE OF CITY AREA IN 2010
Santa Marta	2.457	186,2	3.686	84	3.397	0,9	4.586	1,2	6.190	1,7	8.356	2,3	11.280	3,1
Valledupar	2.816	127,8	4.224	122	4.098	1,0	5.532	1,3	7.467	1,8	10.080	2,4	13.607	3,2
Monteria	3.257	99,2	4.886	152	4.218	0,9	5.694	1,2	7.686	1,6	10.375	2,1	14.005	2,9
Tunja	1.684	100,1	2.526	150	2.371	0,9	3.201	1,3	4.321	1,7	5.832	2,3	7.873	3,1
Yopal	1.178	111,4	1.767	136	4.084	2,3	5.513	3,1	7.442	4,2	10.046	5,7	13.561	7,7

Table 3: Projected city areas in five Colombian Cities 2010 -2040, based on five scenarios regarding changes in city area per person.

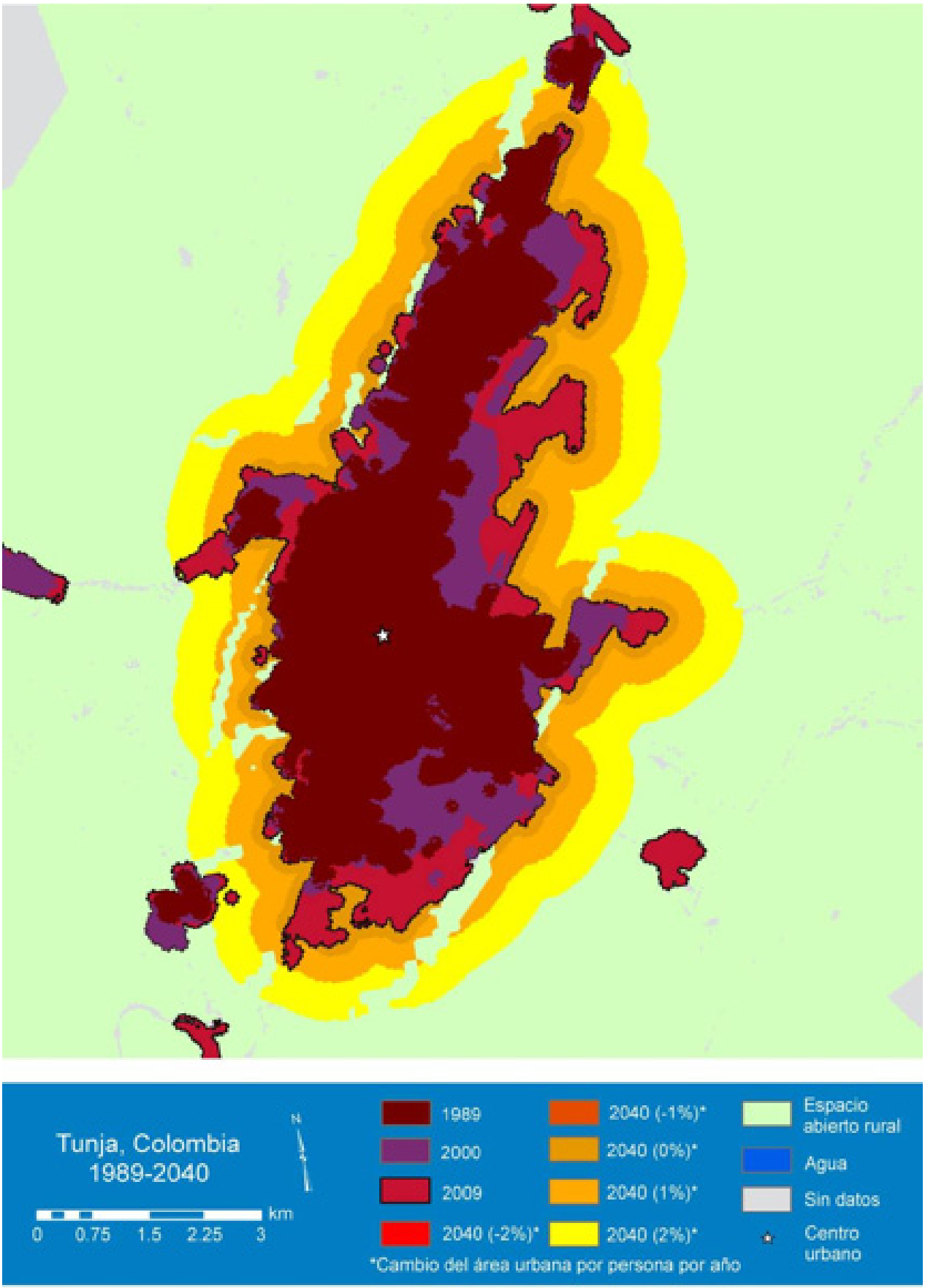
Monteria


Monteria, Colombia
1989-2040
km
0 1 2 3 4
N
1989
2002
2010
2040 (-2%)*
2040 (-1%)*
2040 (0%)*
2040 (1%)*
2040 (2%)*
Espacio abierto rural
Agua
Sin datos
Centro urbano
*Cambio del área urbana por persona por año

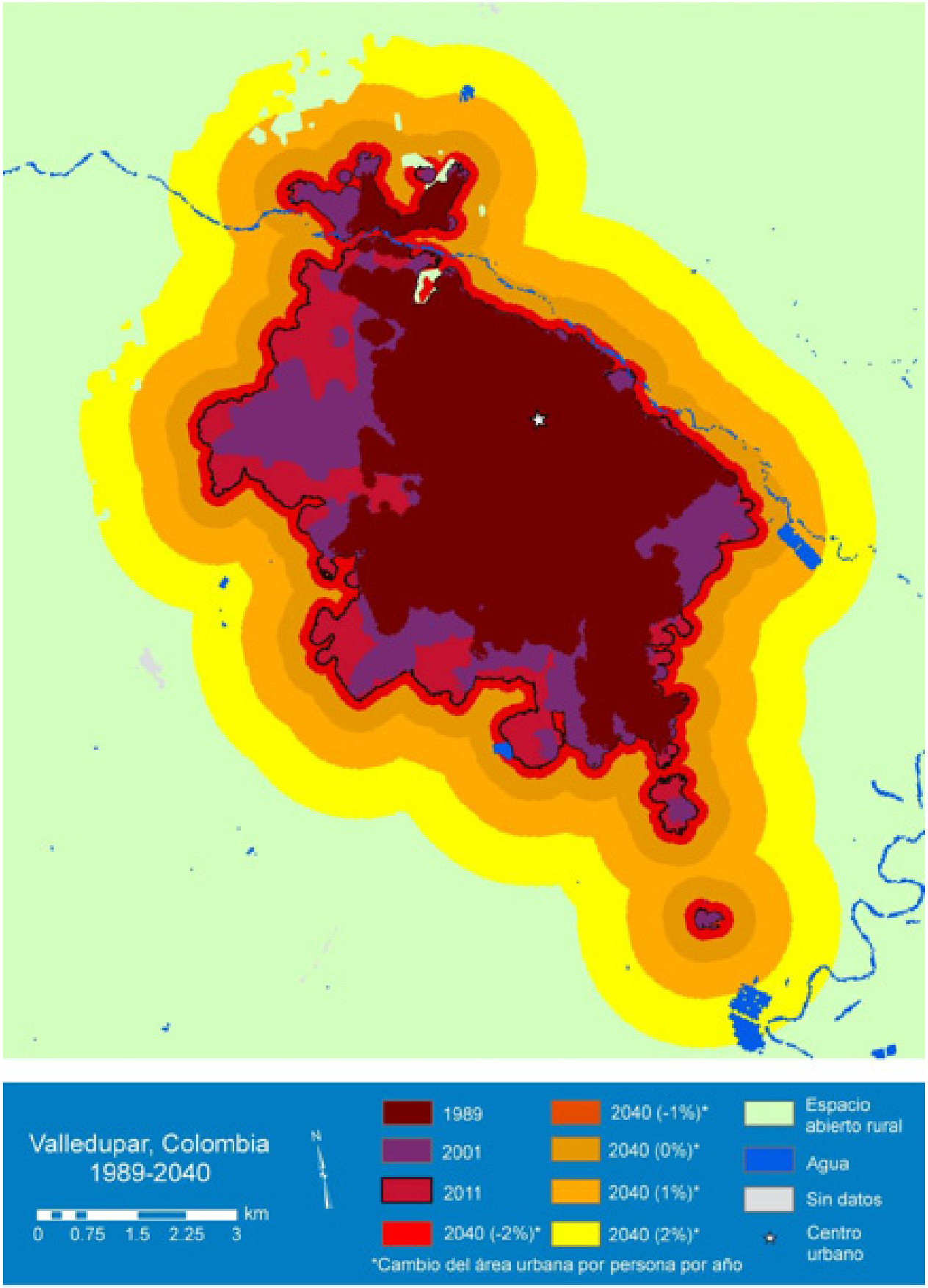
Santa Marta


Santa Marta, Colombia
1989-2040
km
0 1 2 3 4
1989
2000
2011
2040 (-2%)*
2040 (-1%)*
2040 (0%)*
2040 (1%)*
2040 (2%)*
*Cambio del área urbana por persona por año
Espacio abierto rural
Agua
Sin datos
Centro urbano

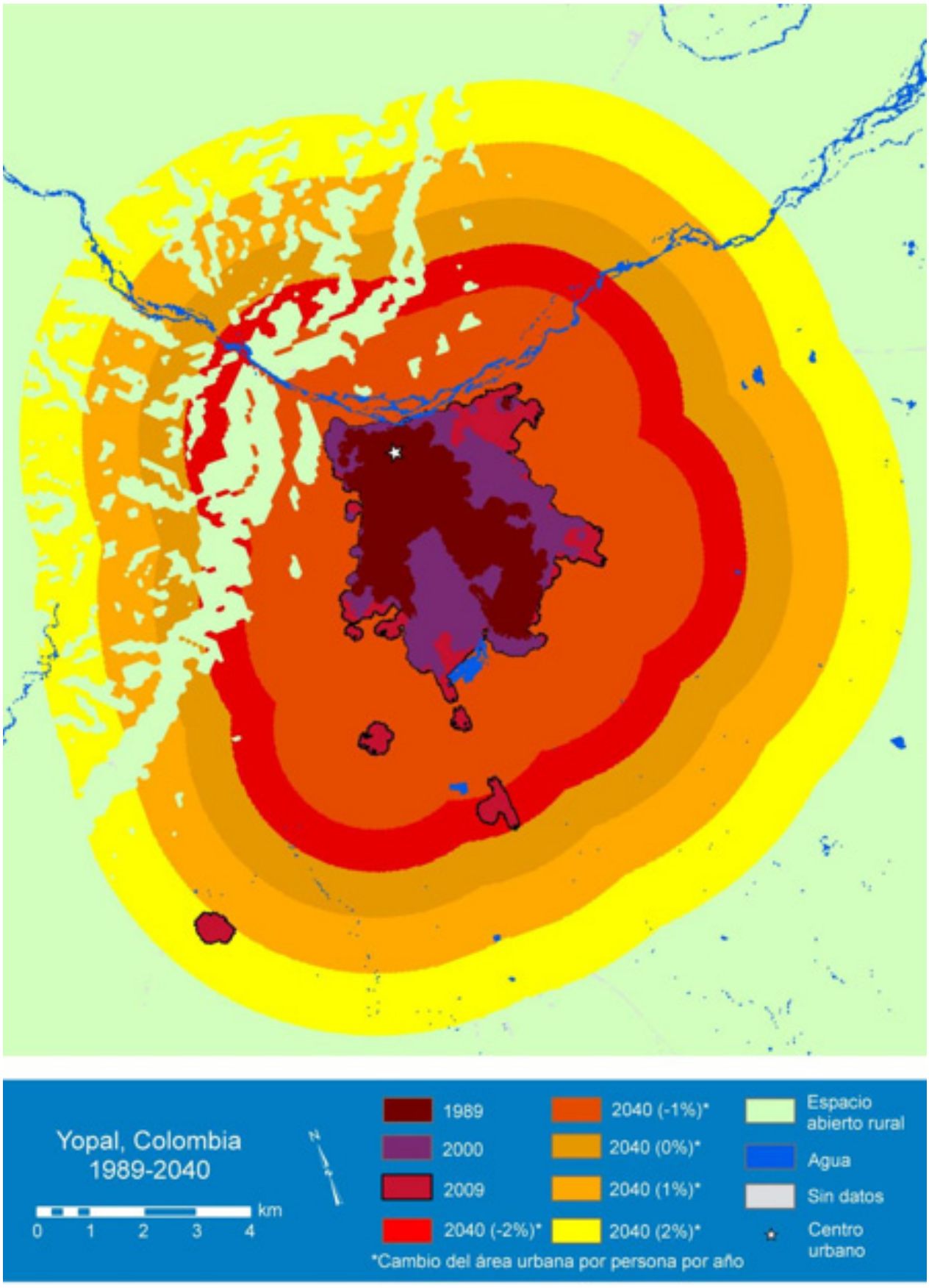
Tunja


Tunja, Colombia
1989-2040
N
km
0
0.75
1.5
2.25
3
1989
2000
2009
2040 (-2%)*
2040 (-1%)*
2040 (0%)*
2040 (1%)*
2040 (2%)*
*Cambio del área urbana por persona por año
Espacio abierto rural
Agua
Sin datos
Centro urbano

Valledupar


Valledupar, Colombia
1989-2040
km
0 0.75 1.5 2.25 3
N
1989
2001
2011
2040 (-2%)*
2040 (-1%)*
2040 (0%)*
2040 (1%)*
2040 (2%)*
*Cambio del área urbana por persona por año
Espacio abierto rural
Agua
Sin datos
Centro urbano

Yopal


Yopal, Colombia
1989-2040
km
0 1 2 3 4
N
1989
2000
2009
2040 (-2%)*
2040 (-1%)*
2040 (0%)*
2040 (1%)*
2040 (2%)*
*Cambio del área urbana por persona por año
Espacio abierto rural
Agua
Sin datos
Centro urbano

URBAN EXPANSION

APPENDIX 3:

List of participants at the National Workshop for Urban Expansion in Colombia

Hotel Santa Clara,
Cartagena, Colombia
September 2- 4, 2013

NYU STERN | URBANIZATION PROJECT

CITY / ORGANIZATION	FULL NAME	TITLE
Montería	Carlos Eduardo Correa Scaf	Alcalde Montería
Montería	Carlos Montoya	Secretario de Planeación Municipal
Montería	Joaquín Esquivia	Secretario de Infraestructura Municipal
Montería	Jhon Nell Rodríguez	Arquitecto Secretaria de Planeación
Montería	Fabián Alonso Duarte	Asesor Jurídico Secretaria de Planeación
Tunja	Nancy Andrea Ramírez	Secretaria de Planeación
Tunja	Gloría Esperanza Católico	Profesional Universitario
Tunja	Laura Marcela Correal	Profesional Universitario
Tunja	Karen Martínez	Técnico
Tunja	María Inés Parra	Técnico
Yopal	Lucía Gaona Martínez	Jefe Oficina Asesora de Planeación
Yopal	Marco Antonio Montaña	Secretario de Obras Públicas
Yopal	Luis Ángel Barrera	Asesor POT
Valledupar	Freddys Socarras	Alcalde Valledupar
Valledupar	Aníbal José Quiroz	Secretario de Planeación Distrital
Valledupar	Jair José González	Secretario de Obras Públicas
Valledupar	Miguel Enrique Villazón	Asesor Despacho Alcalde
Valledupar	Jorge Armando Maestre	Arquitecto Planeación
Santa Marta	Carlos Caicedo	Alcalde Santa Marta
Santa Marta	John Valle	Secretario Planeación
Santa Marta	Liane Saumet	Asesora Oficina Planeación
Santa Marta	Miguel Cantillo	Director DADMA
Santa Marta	Pedro Lacouture	Secretario de Obras Públicas
New York University	Shlomo Angel	Director Iniciativa para la Expansión Urbana
New York University	Jaime Vásconez	Líder Iniciativa para la Expansión Urbana Colombia
New York University	Nicolás Galarza	Coordinador Iniciativa para la Expansión Urbana Colombia
Espacio Legal	Carlos García	Asesor Legal y Jurídico
Espacio Legal	Ángela Rosa Hoyos	Asesora Legal y Jurídica
Ekki Ingeniería	Oswaldo Plata	Asesor Infraestructura y presupuesto
Fundación Ciudad Humana	Ricardo Montezuma	Asesor Movilidad
Fundación Guayacanal	Germán Camargo Ponce de León	Asesor Asuntos Ambientales
FINDETER	María del Rosario Hidalgo	Dirección de Análisis y Programación Sectorial
FINDETER	Ricardo Plata	Director Sede Caribe
CAF	Soraya Azan	Dirección de Análisis y Programación Sectorial
CAF	Carolina Rueda	Ejecutiva Principal

URBAN EXPANSION

APPENDIX 4:

Agenda at the National Workshop for Urban Expansion in Colombia

Hotel Santa Clara,
Cartagena, Colombia
September 2- 4, 2013

NYU STERN | URBANIZATION PROJECT

URBAN EXPANSION INITIATIVE IN COLOMBIA

National Workshop for Urban Expansion in Colombia
September 2-4, 2013, Hotel Santa Clara, Cartagena, Bolívar, Colombia

Agenda for the Urban Expansion Initiative in Colombia

DAY	TIME	ACTIVITY	PARTICIPANTS
Day 1 Monday, September 2	8:30-9:30	Opening and presentation of the Urban Expansion Initiative	Dr. Shlomo Angel, New York University Director of the Urban Expansion Initiative
	9:30-10:30	Introduction to the agenda and operational aspects of the workshop	Architect, Jaime Vásconez, Leader of the Urban Expansion Initiative in Colombia Dr. Nicolás Galarza Coordinator of the Urban Expansion Initiative in Colombia
	10:30-11:00	Recess	
	11:00-11:30	Invited organizations	Corporación Andina de Fomento (Latin American Development Bank)
	11:30-12:30	Initial presentation of cities	Dr. Carlos E. Correa, Mayor of Montería Dr. Freddys Socarras, Mayor of Valledupar
	12:30-14:00	Lunch	
	14:00-15:30	Initial presentation of cities (continued)	Dr. Carlos Caicedo, Mayor of Santa Marta Dr. Lucía Gaona, Consultant's Office of Planning of Yopal Architect, Andrea Ramírez, Secretary of Planning of Tunja
	15:30-16:00	Recess	
	16:00-17:30	Expert presentations	Dr. Germán Camargo: Environmental aspects Dr. Ángela Hoyos, Archtect Andrés García: Legal and regulatory aspects
Day 2 Tuesday, September 3	9:00 – 10:30	Expert presentations	Dr. Germán Camargo: Environmental aspects Dr. Ángela Hoyos, Architect Andrés García: Legal and regulatory aspects
	10:30-11:00	Recess	
	11:00-12:30	Design workshop	Municipal and expert teams
	12:30- 14:00	Lunch	
	14:00-16:00	Design workshop (continued)	Municipal and expert teams
	16:00- 16:30	Recess	
	16:30 -17:30	Design workshop (continued)	Municipal and expert teams
Day 3 Wednesday, September 4	10:00-13:00	Field visit	All participants
	13:00-14:30	Lunch	
	14:30-16:00	Presentation of proposed Plans of Action	Municipal team of Yopal Municipal team of Montería Municipal team of Tunja Municipal team of Valledupar Municipal team of Santa Marta
	16:00-16:30	Recess	
	16:30-18:00	Evaluation	All participants