

# Urban development and housing in León, Nicaragua

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## Urban development and housing in León

*Nicaragua is a country where self-construction of homes plays a very important role in housing provision. This is also the case in the municipality of León (213,000 inhabitants in 2022). Research into urban development and public housing took place between 1990 and 2018, as part of León's city partnership with Utrecht. The urban development of León is representative of the situation in Central America. Many municipalities have developed their spatial planning and public housing policies, but have struggled with limitations in terms of manpower, finances, and competencies. However, demand for housing remained high and many families were forced to build and improve their own homes. Poverty was also high in León, but this municipality received long-term assistance from NGOs and international city partnerships, some of which made substantial contributions to urban development and social housing. The León Southeast expansion plan has strong similarities with the sites-and-services projects in the suburbs of Lima, Peru.*

### City partnerships

This paper discusses the results of the city partnership between León (Nicaragua) and Utrecht (the Netherlands) between 1988 and 2018. Utrecht supported León with specialist knowledge and funding for several projects. This was done in the context of solidarity with Nicaragua, a poor country that had suffered for decades under the dictatorship of the Somoza clan. The liberation movement that came to power in 1979 ruled the country until 1990. This was a period of initial reconstruction, while international city partnerships implemented various solidarity programs.

During that period, the Netherlands had 17 city partnerships with Nicaragua. Utrecht was twinned with León, The Hague with Juigalpa, Tilburg with Matagalpa, and Amsterdam with Managua. Initially, friendships developed between private organizations in a Dutch city and a Nicaraguan sister city. This was followed by contacts between the city councils. The Dutch government used the city partnerships for its development policy, particularly in Nicaragua and South Africa, and made funding programs available over the years. Overseas partnerships of experts provided knowledge transfer and training for various municipal tasks. Many experts were sent to Nicaragua on short-term missions, but the city partnerships remained in place for many years. The Dutch municipalities involved, thus became international aid organizations, but this was temporal. This chapter focuses on the city partnership between León and Utrecht, and in particular on urban development and public housing between 1990 and 2018.

### Political background

From the 1950s and 1960s onwards, many governments in Latin America sought solutions to the housing problem of their large poor populations. Many people were unable to find affordable housing and were more or less forced to build simple shelters on vacant lots. This led to the formation of slums, substandard housing, and depressing living environments. There was often a lack of safe drinking water, electricity, sewage systems, and other basic services. Safety for residents was often far below standard. This was roughly the situation in many countries in Latin America. Nicaragua was no exception. Simple land-for-housing projects ('sites-and-services') were set up and small-scale housing projects were realized with the

help of international governments and NGOs. For many years, Nicaragua was one of the poorest countries in Latin America as a result of the dictatorship that lasted until 1979, the difficult reconstruction process that began in 1980, and the civil war of 1980-1985. After 2007, Nicaragua became a reasonably stable country that maintained good relations with international institutions such as the Inter-American Development Bank. Among other things, this ensured that public housing was financed from 2005 onwards on the basis of a new financing model that had previously been applied in Chile and Mexico. After 2010, this led to some dynamism in housing provision for lower middle-income households in Nicaragua. Until 2018, the country was still safe for residents and tourists. However, President Ortega's regime has a strong tendency toward dictatorial behavior. This has led to domestic tensions and unsafe situations for many Nicaraguans. This may have had consequences for social housing production in the country. Several NGOs have left the country. However, the NGO Habitat for Humanity remains committed to social housing production by providing services that improve the quality of self-build homes and by offering training. They provide access to microloans and the involvement of (international) volunteers. Such initiatives ensure that many families who want to build a home are still being reached.

**Box 1** *A brief political history*

Nicaragua became an independent republic in 1838. In 1909, the liberal government of Santos Zelaya was overthrown by Mexico and the United States. Between 1909 and 1933, the country was occupied by the US. Meanwhile, Somoza had become the strong man and managed to establish a dynasty that remained in power between 1927 and 1979. The dictatorial regime was overthrown in 1979 by the Sandinistas, a socialist liberation movement. The country was initially governed by a socialist junta, the National Reconstruction Committee. In 1985, Daniel Ortega became president on behalf of the Sandinista party FSLN after elections. An anti-government movement emerged which, with military support from the US, launched a campaign of terror against the legitimate government. The country was plunged into a costly civil war that lasted several years. In the 1990 elections, the Sandinistas were defeated and the liberal Violeta Chamorro became president, but she had to govern a severely impoverished country. She was followed by two other liberal presidents: Aleman, who was convicted of corruption after his term in office, and then Enrique Bolaños. In 2007, Ortega was re-elected president and then four more times: in 2011, 2016, 2021 and 2025. In April 2018, protests broke out against Ortega's government, which had announced measures to cut social benefits. These protests were brutally suppressed, leaving 300 dead and thousands injured. Since then, there has been no freedom of the press or freedom of expression. Human rights have been seriously violated. Political opponents and journalists were imprisoned. Tens of thousands of people fled the country. It seems that in 2023 the situation in Nicaragua will be somewhat calmer, but citizens must live under severe repression, which causes a great deal of fear and uncertainty. Many international contacts have been cancelled.

### **Housing situation in Nicaragua and León**

In Nicaragua, self-build has always been an important factor in housing provision. This was due to the government's limited financial resources for social housing and the fact that many families are very poor.

The 2005 national housing plan reported that 85 percent of housing production was still carried out through self-construction and self-financing. This picture was confirmed by Ninette Morales, director of the aid organization Habitar. She reported that even before 1980, private developers were carrying out illegal land seizures and informal land divisions, which led to precarious conditions for the poorest people. In the capital Managua alone, 274 spontaneous settlements were counted in 2001 where land ownership was not registered. Between 2005 and 2018, the economic situation in the country improved, but 30 percent of households still lived below the poverty line.

In the 1980s, Nicaragua's new government was confronted with widespread poverty and poor economic conditions. However, the government did achieve some successes in improving the position of the poor and building up the health care system. It also wanted to improve the bad living conditions of the poor, but there was no organized production system for social housing. A few social housing projects were realized, but the number of homes built was small. Some municipalities made small plots of land available to individual families so that they could build their own homes. Plots were laid out on former agricultural land and allocated by the municipality to poor families. In 1989, for example, the municipality of León made 1,200 plots measuring 8 x 20 meters available free of charge to households that did not yet have their own homes. The families had to build their own homes and do everything else themselves, such as digging latrines and applying for connection to the electricity grid. Sometimes groups of residents were able to get help from one of the many aid organizations active in Nicaragua. Quite a few housing projects were also set up with simple homes, based on solidarity from foreign aid organizations. These were often starter homes that could be expanded later; technical assistance was sometimes provided, or building materials were made available through a building materials bank.

After 2000, the government made subsidies available for simple housing construction, which the municipality of León made good use of. It was not until 2010/2011 that families were able to obtain loans for housing construction through the Social Housing Fund (FOSOVI). The municipality of León did spend its own money on the construction of a limited number of very simple homes. The *León Southeast* land for housing project was intended for the production of plots for self-construction, simple social housing, and cooperative housing. In the period after 2010, the focus shifted to project-based housing construction, in which plots with subsidized homes were built by project developers and sold to middle-income households.

### **Characteristics of León**

León is Nicaragua's second largest city and the capital of the department ('departamento') of León. The municipality of León covers a large area of 820 km<sup>2</sup>, with a central city and large and small villages in rural areas. León has extensive agricultural areas, as well as forests and nature reserves. The municipality borders the Pacific Ocean, where there are beautiful beaches. In 2015, the municipality had 205,000 inhabitants, and the central city had 168,000. In 2005, the department of León had approximately 390,000 inhabitants. León is a colonial city with a historic center and beautiful architecture. Over the past 10-15 years, the local government has invested heavily in improving the historic center. Vacant lots were built on, and town houses, churches, markets, and city squares were renovated. The central square in front of

the basilica was made traffic-free. The improvements made León attractive to tourism. Crime in Nicaragua was relatively low compared to Honduras and El Salvador, for example.

León's traditional economy was based on local and regional agriculture, horticulture, and livestock farming. Small and medium-sized enterprises play an important role in the economy. There are a few foreign assembly plants in the free trade zone, which employs many people. This zone is important for the local economy, in addition to the money sent home by residents' relatives living abroad. The university and other educational institutions are important for the city's vitality. All in all, León is a commercial, cultural, and educational center in northwestern Nicaragua. Tourism has increased significantly since 2010, but suffered a decline in April 2018 due to political unrest resulting from repressive measures taken by the government against demonstrators who were protesting for their social rights.

The western coastal region of Nicaragua, of which León is a part, is vulnerable to natural disasters such as the 1972 earthquake in Managua, the 1992 offshore earthquake and tsunami, Hurricane Mitch in 1998, and the 1995 eruption of the Cerro Negro volcano near León. The municipality of León must also take these disasters into account and therefore carries out risk analyses to be as well prepared as possible for new disasters. This vulnerability has consequences for the way in which the city of León is developed and houses are built.

### **León-Utrecht city partnership**

The first identification of León's requests for assistance to Utrecht was carried out in 1986 by Dick Stiemer, director of the Public Works Department. This led to an official city partnership that would last until 2016. Various project-based activities were then launched. At the same time, León asked Utrecht for technical assistance in actualizing the Zone Plan that had been drawn up by the Ministry of Housing in 1986. León wanted to update that plan and have a new structural plan drawn up, as well as various urban designs for residential areas. Below is an overview of the projects carried out by the León-Utrecht city partnership in the field of urban development and public housing:

#### *Overview of activities for urban planning and public housing*

##### **1987.** *Identification of request for assistance from León*

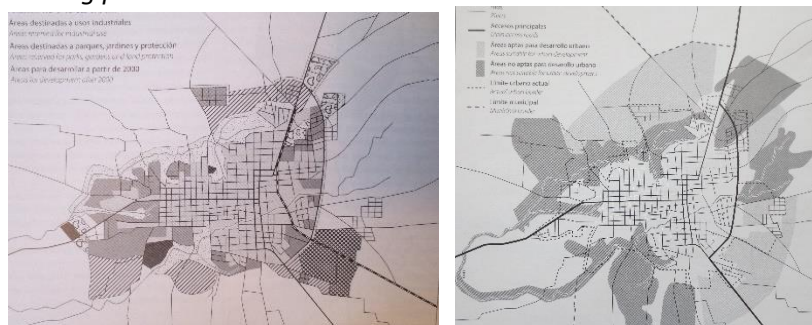
The request for assistance led to joint activities in the areas of housing, sewerage, landscaping, water management, and urban planning. The first report for the municipality of Utrecht led to the official city partnership between Utrecht and León.

##### **1990.** *Identification of urban development needs*

The first identification mission on urban development and public housing in León was carried out in May 1990 by Jan Bredenoord, who was an urban planner in Utrecht at the time. The main request for assistance was: help us professionalize urban development, both in terms of content and organization. The urban development department in León was very small and still had to be set up. At the time, there were two spatial models for the development of the city: 1) concentrated development with possible residential locations within a radius of 3 km from the center, and 2) development along a few main roads. New residential locations could connect to the eastern residential neighborhoods of Ruben Dario and Salomon de la Selva, which the municipality had already started developing before 1990.

**1993–1996.** *Development of a master plan for León*

*Zoning plans available in 1990.*



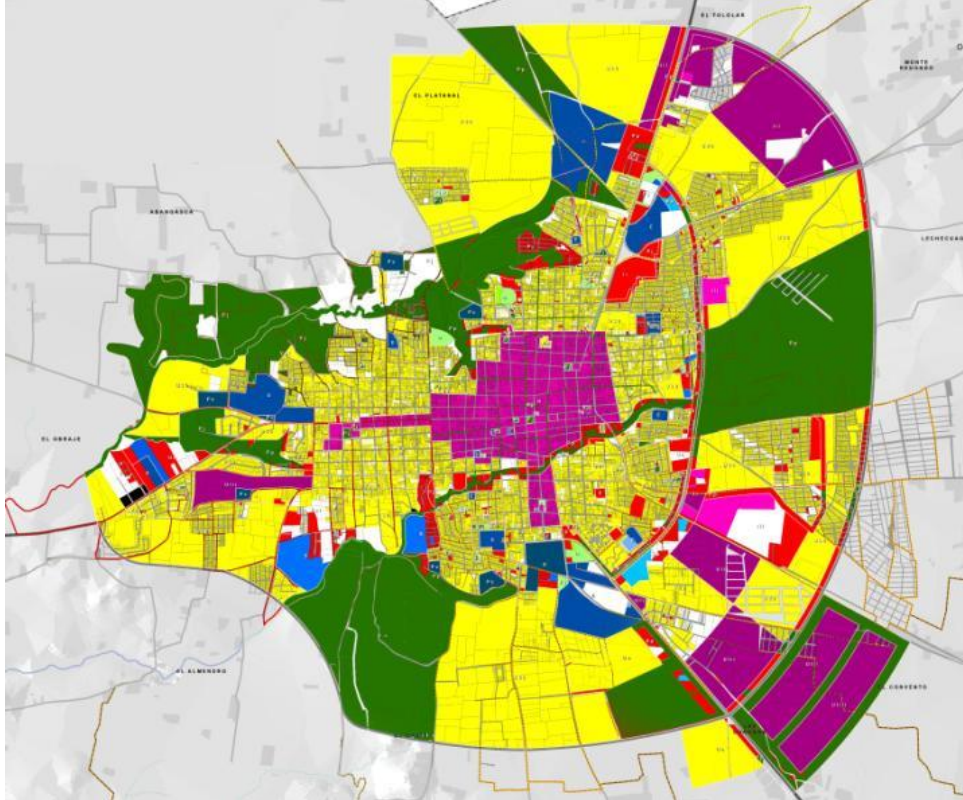
**1996.** *León Master Plan and follow-up*

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expansion plan. In the years that followed, the city partnership worked on a strategic plan for the municipality (Plan Estratégico de León), an elaboration of the master plan and a tool for discussing policy with residents' organizations, utility companies, and the business community.

*Base map of the 1996-2010 master plan. - Plan Estratégico de desarrollo Municipal de León*



*Source: Municipality of León. (Yellow is residential; purple is commercial; green is protected areas, including nature)*

### **1999–2018. Southeast León**

In 1998, planning began for the Southeast urban expansion. The spatial and organizational development of the Southeast plot program was initially a *sites-and-services program*, as had been done previously in other countries. Southeast was designed to produce 5,000 plots for housing for lower- and middle-income households. At least 20,000 people would be able to live here. The Southeast expansion was seen as the new district of León, which, together with existing residential neighborhoods, would have a population of approximately 50,000 in the future. The municipality of Utrecht helped with investments between 1999 and 2015. This was made possible by the Association of Netherlands Municipalities, which implemented the 'Logo South' program on behalf of the Dutch government. Utrecht also supported several smaller projects within the district. A project office was established in 1999. Enrique López was project leader for the first 12 years, working with a local core team of six to ten employees, including an architect-urban planner, civil engineer, draughtsman, economist, and administrator. A land fund was established, which was given separate status within the municipality to ensure the progress of the project.

The project office focused on planning access roads, rainwater management, sewerage, and the integration of landscape elements. They also consulted with residents and their organizations, as well as

with government agencies, utility companies, and aid organizations. Residents were involved in the plan's development and progress through social work and *Movimiento Comunal*, an official participatory body.

From the outset, León Southeast consisted of three sub-areas: I, II, and III. The first land purchases were made in sub-area III, which was then still agricultural land. Subsequently, sub-area II, was designated for housing for middle-income groups. The program was gradually developed into an integrated urban development project. Ultimately, more than 6,000 residential plots were built. In 2015/2016, the city partnership between León and Utrecht was terminated. León continued to work on improving the quality of the area, including public green spaces, residential streets, and the sewer system.

*Map images and photos from 2000*



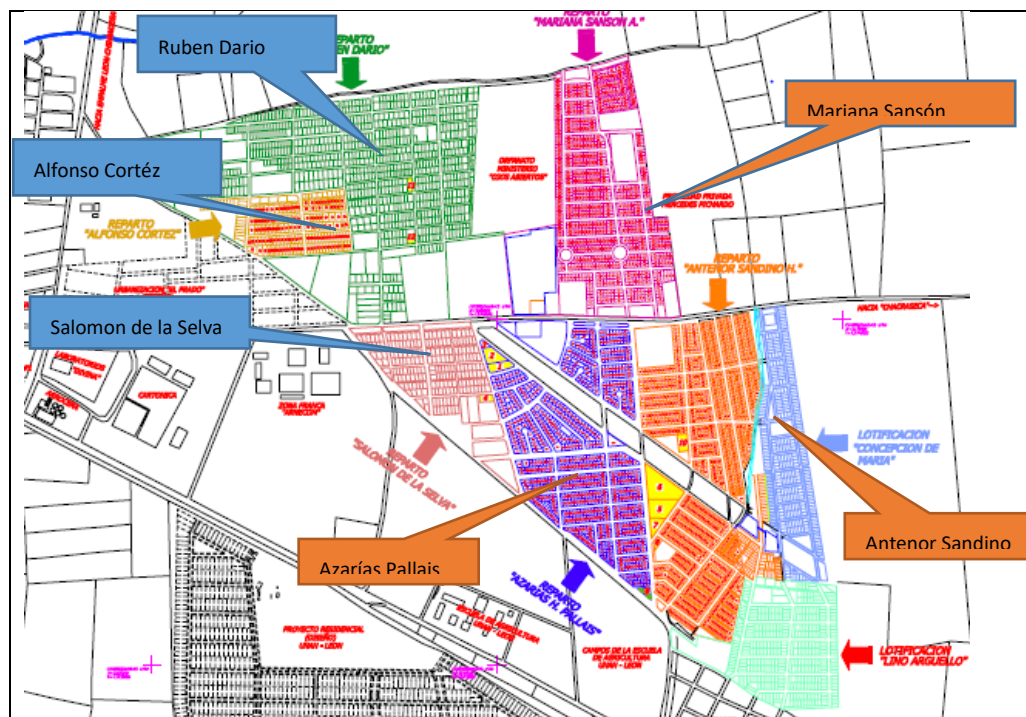
(a: map of Southeast León with three sub-areas, b: structural vision, c: two sub-areas in Southeast)



(a: Aura Salinas at the design of the subarea. b. Self-built house. c. Cooperative housing)

**Figure 1. Overview of old and new residential areas in Southeast**





### *Phases of Southeast*

There were three distinct phases in the development of Southeast. After analyzing the development process between 1998 and 2018, it was determined that there were three different phases of 6-7 years each with characteristic differences in plot and housing production.

#### **Phase 1** - *Start of plot allocation; self-help housing construction; subsidized housing projects (1998-2004)*

The development of Southeast began with the design of the first urban development sub plan. Subsequently, three new residential neighborhoods were developed. Roads, water pipes, and electricity were installed. Income from land sales was used to maintain the land fund. The water company ENACAL invested in the water supply with assistance from the United Nations Development Program (UNDP) and the European Union. Electricity was installed by the company Unión Fenosa. Initially, there was no sewage system, and self-builders had to dig latrines or build septic tanks. Buyers received official title deeds through the municipality.

##### *Self-build plots*

This plot development led to the rapid sale of plots to families, but large-scale self-build activities did not immediately follow. Plots were initially sold at low prices, averaging US\$ 250. Between 2003 and 2005, hundreds of homes were built, with NGOs selling plots to families. By the end of 2005, approximately 2,700 residential plots had been completed, half of which were simple plots on unpaved roads and the other half larger plots on semi-paved roads with footpaths. The number of self-built homes was estimated at 500 in 2004. By the end of 2004 and early 2005, 3,000 plots had already been produced, with approximately half of them built on.

##### *Plots for social housing*

Between 2002 and 2005, plots were also sold to NGOs that built homes and transferred land and homes to low-income households. The NGOs were Habitat for Humanity, Ceprodel, Cáritas, Colmena, and Fundapadele. The company Arnecom bought plots to house its own employees. The NGOs received subsidies from the state – via the Nicaraguan Housing Institute INVUR – and a few donors. Together, they were able to build around 700 simple homes. These were subsidized homes, but a number of them were donated by Fundapadele to the poorest families. The construction costs of the (starter) homes ranged from US\$ 3,000 to US\$ 6,000.

Figure 1 shows the old and new residential areas in Sub-area III of Southeast. Residential neighborhoods from before 2000 are: Alfonso Cortéz, Ruben Darío, and Salomón de la Selva. The residential neighborhoods from 2000 and later are: Azarías H. Pallaís, Antenor Sandino, and Mariana Sansón. The figure below shows examples of self-build and project-based construction.

##### *Completed in Phase 1.*

In the beginning, there was only basic infrastructure with unpaved or semi-paved roads. The plots were sold directly to individual families. During this phase, a temporary state fund became available in 2003 for low-cost social housing. During this period, 2,047 plots were produced for self-build within the regular plot program, of which 53 percent were still undeveloped in 2006, according to the municipality of León. This was a slow tail, partly due to the still limited infrastructure.

*Examples of self-build and project-based construction*



(a: Self-build with minimal wall thicknesses and columns. b: Prefab housing project by Fundapadele/Colmena. c Housing project by Habitat for Humanity)

***Phase 2 – Plot development, materials bank, self-build, cooperatives (2005-2011)***

Many plot owners had started building their homes. This was sometimes a slow process and occasionally it went quickly. Other plot owners left their plots empty and unmanaged for years. Research conducted by students from Utrecht University between 2004 and 2007 showed that many buyers were reluctant to move to Southeast, because they thought the area was too isolated and unsafe. In 2004 and 2005, the residential areas 'Concepción de María' and 'Lino Arguëllo' were completed, and 'Santa María' in two phases. Within the plot program, an additional residential neighborhood was built outside the *Southeast* plan area. The municipality then acquired 70 hectares of building land in Southeast, adjacent to the Mariana Sansón residential neighborhood. This new area was named 'Utrecht', where approximately 1,500 residential plots would be built. Two plot projects were started in subarea II. Roads and utilities were then constructed, including water pipes and electricity supplies. Work began on a water treatment plant.

*Self-help housing and the building materials bank*

The project office sought ways to help self-builders with technical support. With the help of Utrecht, a municipal building materials bank was set up. The bank designed a model for a modest home, which was realized by a professional construction team. Applicants could obtain a loan. The cost of these homes was approximately US\$ 8,000.

*Housing cooperatives*

During this period, ten housing cooperatives were established, all of which purchased land in Southeast for their members. Families would build in small groups. The first cooperative, Juntando Manos, built 33 homes in 2007/2008 with the help of the Swedish NGO We Effect, following the approach of FUCVAM, the Uruguayan Federation of Mutual Aid Housing Cooperatives. The concept includes joint ownership of land and homes.

*Housing for middle-income groups*

Between 2006 and 2009, affordable social housing projects were no longer possible due to a lack of subsidies. After 2009/2010, new opportunities for housing finance emerged in Nicaragua, based on the 'A-B-C formula': A) use savings, B) obtain subsidies, and C) obtain a soft loan or mortgage. This subsidy system benefited middle-income groups. León sold clusters of plots to private developers and the teachers' union. These organizations started building neighborhoods and sold homes to households in "Utrecht." The plots in subarea II were intended for middle- and higher-income households. One of these was a residential area for free sector plots. Many of these plots remained undeveloped for years.

*Realized in Phase 2*

The number of self-build homes in Southeast grew steadily, while the production of social housing stagnated. The municipality set up a building materials bank to support self-builders. After 2009, the

government established a new financing system. The implementers of housing programs are no longer NGOs but commercial parties.

*Images of León Southeast, Subarea 'Sector' III, Subarea II.*



*a: model house building materials bank, b: 'Praderas de Nuevo León', c: housing cooperative*

***Phase 3. Infrastructure, self-help housing, middle-class housing, neighborhood consolidation (2012-2018).***

In this phase, a program was drawn up to improve the neighborhoods created in the first phase. More attention was paid to facilities such as schools, health centers, and green spaces. Project developers delivered high-quality homes, which led to dynamism in the Utrecht neighborhood. Several other construction projects were carried out at scattered locations in subarea II. The government paved the road to Chacaraseca, making Southeast more accessible. A fund from the Inter-American Development Bank (IDB) enabled a neighborhood renovation project in Azarías H. Pallais, including the construction of sewers, paved roads, and connection to the water treatment plant. A second water treatment plant was also built. In 2018, the municipality started the implementation of the linear neighborhood park in the Azarías H. Pallais neighborhood. In that year, an INATEC school building was built for secondary vocational education for approximately 1,100 students.

***Self-help housing, building materials bank, housing cooperatives***

In this phase, self-construction was no longer predominant. Project-based housing was also developed. On the outskirts of Southeast, approximately 135 homes were built for low-income households with financial support from León, the government, and the American Nicaraguan Foundation (ANF). The building materials bank built a total of 150 basic homes and provided assistance with 350 home improvements. Two housing cooperatives built housing clusters. Seven housing cooperatives were unable to build due to a lack of funding.

***Housing projects for middle-income groups***

In sub-area III, 300 homes were built by the teachers' union and 460 by two project developers. The homes were sold quickly and the project developers realized follow-up phases in the 'Utrecht' neighborhood. The same happened in sub-area II, where two other project developers developed homes, with follow-up phases. There was therefore a real demand for subsidized homes, which was completely new in León. The prices of these homes in 'CastelNica' vary between US\$ 16,800 and US\$ 23,500 (in 2018). Realnisa created 464 homes in 'Residencial Praderas de Nuevo León', with prices ranging from US\$ 19,000 to US\$ 35,000. Prices for more expensive homes range from US\$ 40,000 to US\$ 65,000 in another private project.

***Achieved in Phase 3.***

During this period, spatial dynamics in Southeast were significant as a result of new government policy on infrastructure and subsidies, while municipal measures ensured the renovation of older residential areas in Southeast. Initiatives for individual home renovations were ongoing, and housing cooperatives developed several collective housing plans. In 2018, the municipality of Souteast drew up an initial vision

for the further development of subarea II and for additional studies and partnerships. The León-Utrecht city partnership believed that the consolidation process in Southeast was well underway. In 2015, the Utrecht-León city partnership was evaluated by Utrecht University.

*Images in León Southeast, Subareas III and II. Period 2012-2018*



(a: Self-built house. b: Housing development by developer Dominguez, c: Teachers' houses)

### State of affairs in 2018

For many years, the municipality of Utrecht provided technical assistance, training, and process support to the Southeast project office and municipal departments. The pre-investments for the purchase of land and spatial planning were crucial. The revolving fund supported the Southeast project from 2000 to around 2013. By then, the 5,000 planned plots had already been developed. León and private developers subsequently developed at least 1,000 additional plots.

Southeast, which started as a *land-for-housing program* for self-builders, gradually became an integrated urban expansion project. Many parties contributed to this, including the municipality, NGOs, project developers, and cooperatives. In two phases, between 2003 and 2006 and between 2010 and 2018, social housing became possible in Southeast. The first impetus was provided by subsidies for low-cost housing; the second by a new form of subsidy for subsidized homes. The latter was made possible in part by a growing group of middle-income households.

The presence of the building materials bank, later in combination with the municipal building materials factory and the housing cooperatives, led to the construction of good, affordable homes, but the numbers remained low. According to officials involved, this was due to a lack of government funding for these types of housing. Social workers reported that a large group of lower-income households were still struggling to survive economically and were barely able to participate in the dynamics of Southeast. During the planning period, self-build was still present, but no longer played a guiding role in development.

The Southeast plot program and housing construction in the three growth phases greatly promoted the development of the district. In 2018, more than 25,000 people were already living in Southeast (including three old neighborhoods from before 2000). The municipality used its own resources to help the poorest residents find housing. Several private funds did the same. The housing construction carried out by project developers between 2013 and 2018 led to higher housing and environmental quality. In subarea III, construction was not only for poor families, but increasingly also for middle-income groups. Ultimately, this has resulted in a mixed population. Public rental housing was never built.

The way in which the government worked with international organizations, such as the Inter-American Development Bank, was effective until April 2018. According to the project office at the time (in 2018 being part of the municipal department of Land and Housing) reported that a total of 4,000 homes had been built in Southeast. Of these, 3,000 homes were built by NGOs and developers in all three periods



combined, and approximately 1,000 homes were built by families through self-build, but the latter number may also be higher.

The combined results of the main areas of work in Southeast are presented in the table below. These results cover the areas of social development, housing, medical facilities, schools, water management and sanitation, environmental projects, and institutional strengthening.

Throughout the entire period of cooperation between León and Utrecht, considerable attention was paid to integrated water management. León is struggling with a declining groundwater table as a result of water extraction by the water company and several industries. The urban designs for the neighborhoods sought to identify opportunities for collecting rainwater and allowing it to infiltrate the soil. The residents of the first sites-and-services plans still had to dig their own latrines on their plots or install septic tanks for the treatment of sewage and waste water. In 2008, a tank was built for the drinking water supply. From 2010, the development of water treatment plants began, so that the neighborhoods can be connected in succession. Hopefully, this process will not be delayed.

#### *Facilities completed in Southeast*



(a: Water tank in Mariana Sansón, b: Treatment plant for the Utrecht neighborhood, c: **Centro Tecnológico Juan de Dios Muñoz** – Vocational education) Sources: a and b: Bredenoord, c: INATEC.

**Table. Combined results of the León Southeast project 1998-2018**

Social development	Housing development	Health facilities	Education facilities	Water and sanitation	Environmental actions	Institutional enforcement
neighborhood facilities (2)	6,000 plots for houses	2 health facilities	4 basis schools	Water and sanitation in 1 neighborhood	Design urban forest park	5 companies enforced
91 community initiatives incorporated	4,000 homes were built	Center for natural medicine	1 secondary school	2 water treatment plants	Renovation neighborhood Azarias H.P.	Urban consolidation policy
12 housing cooperatives founded	135 households allocated to safe area	-	Vocational institute INATEC	Studies future water management	Execution forest park community (communal)	Cooperation with government for housing

Source: Municipality of Utrecht (Etienne de Jager).

### **Challenges in León**

In response to these developments, the effectiveness of the municipality in managing the dynamics and many challenges of the project was reviewed in 2018. The municipality was able to implement spatial planning effectively and coordinate the activities of the private and institutional parties. A start was made on professionalizing building and housing control. León effectively lobbied for assistance from government institutions (subsidies for housing, educational facilities, medical centers, etc.) and other forms of external assistance to develop Southeast Utrecht in a more or less integrated manner.

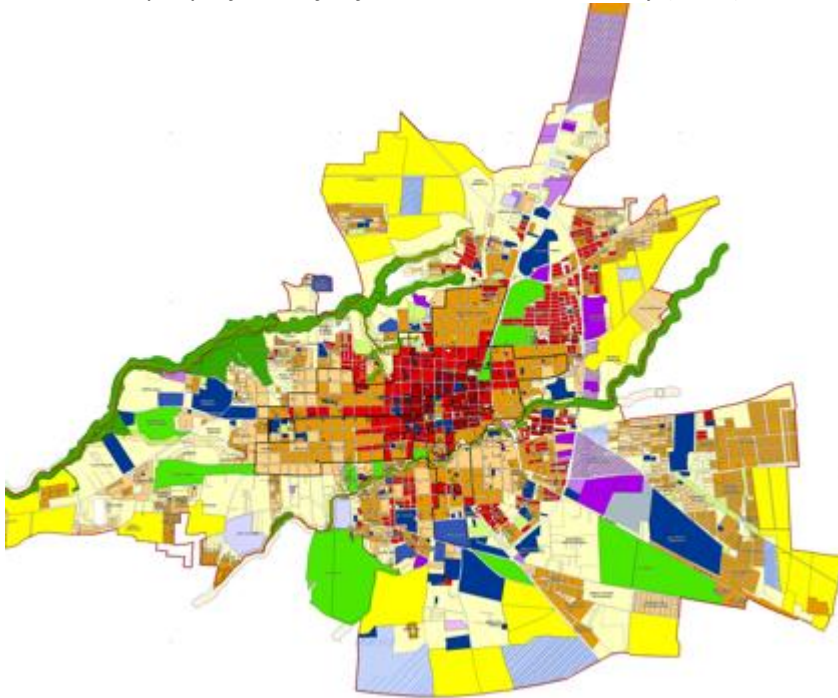


During interviews, several officials from León indicated that the spatial plans for Subarea II should be updated to prevent individual decisions by project developers and landowners from becoming dominant. The municipality could accelerate the construction of roads between Subareas II and III so that they can form a functional unit. In 2018, the municipality was responsible for providing good infrastructure, but was not yet able to generate revenue from land exploitation or benefit from the increase in land values associated with the designation of Subarea II as an urban area.

The *Atlas of Urban Expansions* by UN-Habitat, NYU, and Lincoln Institute shows that Southeast underwent significant expansion between 2000 and 2010. At the same time, several residential areas were realized on the north side of the city outside the planned zoning. In addition to Southeast, space was thus made available for housing in other directions. The realized expansions into the north however, do not cope with the policy of 1995 of not building houses in the precipitation zone of the volcano Cerro Negro. An analysis of the situation in 2020 – carried out using Google Maps 2020 – indicates that Southeast expanded further eastward with the Utrecht neighborhood. The scattered developments outside the Southeast planning area may have competed with Southeast.

The scattered informal developments on the outskirts of the city are recognized in the projections of the municipal planning office (2018). The map below of future land use shows that residential areas, including informal ones, are accepted in various directions (indicated in yellow on the map below). The Southeast plan is now complete, but its implementation and consolidation will take many years.

*León municipal projection for future land use in the city (2018)*



*Source: León municipal planning agency*

Over the years, the project office has repeatedly reserved space in Southeast for the establishment of small-scale businesses to create employment opportunities for local residents. However, there was no demand for new business parks from local entrepreneurs. As a result, the municipality did not develop any

plots for small businesses to set up small enterprises. Discussions held in February 2018 with employees of the municipality of León and private parties indicate that the municipality is facing the following problems in Southeast León, along with possible solutions.

#### *Neighborhood improvement plans*

In 2017/2018, a major renovation was carried out in several residential neighborhoods in Southeast. The first area was *Azarías H. Pallaís*. Residents in other residential neighborhoods in Southeast are asking for similar improvements, which are scheduled to be carried out after 2018. A linear park has been created here, which is used by residents of the surrounding neighborhoods: 'Parque Urbano Los Poetas' (neighborhood park). This park adds considerable quality to the whole Southeast area.

#### *Densification plans*

Several housing development plans are still possible in Southeast, both on vacant plots and in new subdivisions. Higher housing densities and stacked housing are needed within the urban area to prevent space wastage. Such a vision is still unusual in León, but a former housing complex called Fundeci shows that it is indeed possible.

#### *Integration of Southeast components*

Further growth in Southeast León can be guided by a new development plan. A renewed spatial and functional structure for subarea II, in conjunction with subarea III, can make the spread-out development manageable. This will enable the development of a district center in Southeast León, including a community center, commercial facilities, a supermarket, and shops, which can serve the entire future Southeast area.

#### *Safe connection to the city center*

The busy and dangerous junction between Southeast and the Ring Road (Bypass) has become a problem. An additional junction to the Ring Road should be built. Safety for traffic crossing the Ring Road is not optimal. The growing Southeast district needs to be better connected to the city center by public transport. Actualization of the public transport services with buses, minibuses, and taxis is necessary, taking into account the expected doubling of the population in Southeast. A new bus terminal is one of the wishes mentioned. The municipal council does not want the current Ring Road to become a greater barrier to traffic between the existing city and Southeast. However, in 2018, there was no longer political support for a second Ring Road outside Southeast.

#### *The challenges facing Southeast*



(a: Southeast neighborhood park, b: Stacked housing built before 1990, c: Dividing effect of the Ring Road)

## **Epilogue**

For almost three decades, the Utrecht-León city partnership has been involved in important issues relating to spatial development and public housing in León. Utrecht thus took on the role of an international aid organization and focused on knowledge transfer and co-financing projects. Substantive support was provided in various disciplines: urban and landscape design, traffic engineering, environmental science, water management, land use, and social safety. León collaborated with its own government on the planning of schools and other crucial neighborhood facilities. Housing construction in the southeast was partly carried out by landowners through (assisted) self-build projects. Social housing programs were implemented by NGOs in the first phase, and by project developers and housing cooperatives in the second and third phases. Self-build and home renovations were carried out by the families and buyers of the social starter homes.

This paper covers the development of spatial planning and public housing in León up to 2018. In that year, political developments in Nicaragua had a negative impact on the work of international NGOs in the country. These organizations were labeled as "foreign agents," which led many aid organizations to leave the country. International contacts have been limited since then and the further development of (among other things) public housing in León from 2018 onwards is uncertain.

## **Accountability**

Over the years, the author has collaborated with employees of the municipality of Utrecht, including: Desiree van de Ven, Dick Stiemer, Reinier Schat, Gwen van Mossevelde, Cas Verhoeven, Etienne de Jager, and successive municipal administrators. In León, the author collaborated with: Enrique Lopez, Indiana Barrantes, Carolina Blandón, Aura Salinas, Maria Elsa Mena, Fabricio Munguía, Yader Ruíz, and others, including successive mayors. There were also contacts with employees of the NGOs Habitat for Humanity, Ceprodel, We Effect, Fundapadele, and the umbrella organization of housing cooperatives Cencovicod in Nicaragua. Over time, several students from Utrecht University (International Development Studies) have contributed to research on developments in Southeast Nicaragua.

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