Understanding Capacity Development from Insiders’ Perspectives: A Case Study of an Urban Redevelopment Project in Medellin, Colombia

Abstract
In contrast to the current discussion on Capacity Development (CD) which is mostly made from donors’ aid-effectiveness point of view, this paper attempts to explore what foreign donors can learn about CD by tracing the endogenous and long-running CD process from insiders’ perspectives. As a case study, an urban redevelopment project called MIB of the Medellin City of Colombia is examined. After clarifying the initial context of urban poverty in Colombia, the paper traces the six phases of the MIB project: institutional preparation and awareness enhancement, conception of the inclusive-urbanism idea, planning of the MIB, construction/reconstruction of the residences, resettlement of residents, and the scaling-up. Then the paper makes in-depth analysis of the whole process, focusing on five key CD factors identified by Hosono et al (2011): stakeholder ownership, mutual learning, specific drivers, scaling up, and roles of external actors. From the analysis, the paper draws four major lessons on CD research and practice in the future. First, we need to change our time frame by which we look at the CD process. The MIB experience shows that the process can be by far longer than what has been assumed to be by donors and researchers. Second, the current project-centered periodization of development assistance and the overwhelming focus on the project period should be reconsidered. In the MIB, the project implementation phase took only five years among the total process of 30 years. Third, the MIB case shows that documentation of previous projects and seminars which occur in the pre-project phase under donors’ auspices can greatly help local specialists conceive new ideas. Fourth, the post-project phase also merits a greater attention to identify constraints to sustainability and replicability of the project concerned and to explore what external actors can do to overcome the constraints. The paper concludes by pointing out the necessity of accumulating the similar kind of case studies on the CD process made from insiders’ perspectives.

Keywords: Capacity Development, Urban Redevelopment, Social Urbanism, Medellin, Colombia.

Introduction
The concepts of Capacity Development (CD) have emerged as a central issue in recent debates on development. CD indicates a process by which people, organizations, and society as a whole unleash, strengthen, create, and maintain their capacity over time to manage their own affairs successfully (OECD-DAC 2006). Originated chiefly from the self-reflections by the donor community on why aids have not worked as expected, the CD concept has, overall, played an important role in deepening the understanding on how development actually takes place and how donors should behave in their effort to harness it. A broadly shared lesson from discussions on CD is that the capacity is by definition endogenous and consequently donors should catalyze but not try leading the development processes of recipient countries1. The main focus of CD discussion has now shifted to the operationalization of the CD concept including the measurement of the capacity2.

In this author’s view, however, the current CD literatures have been only half successful in making a deep analysis of the endogenous CD process, for the following reasons. First, they examine CD mainly in the context of foreign aids, which would lead to underestimation of endogenous efforts and processes. For

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1 There are so called “ten default principles for CD supports” such as don’t rush and build on existing capacities rather than creating new ones (Lopes and Theisohn 2005:13).
instance, Lopes and Theisohn (2003) sets ten default principles for CD, all from donors’ point of view. The principles dictate how external actors should behave as good providers of CD assistances. Likewise, “The Challenge of Capacity Development: Working towards Good Practice” by OECD-DAC (2006) indicates which areas need urgent attention so that the donor community can promote CD.

Second, related to the first point, the majority of case studies focus on individual development projects or programs, overlooking the possibility that the capacity develops over a long period of time in which several consecutive or related projects (both external and domestic) are involved. For example, JICA (2006), in its first major work on CD (JICA 2006), selected most of the cases from JICA’s technical assistance projects/programs. Likewise, Baser and Morgan (2008) are based on case studies which are either development projects/programs or external supports offered to specific organizations.

Third, the analysis of the CD process is based on interpretation by outsiders while the views and perspectives of insiders (beneficiaries, national service providers, and recipient governments) are not adequately taken into consideration. This is the point that has long been made by sociologists and anthropologists such as Chambers (1983, 1997) and Cernea (1985). Some even go so far as to say that the CD concept has been mainstreamed simply to meet the legitimacy requirements faced by development assistance agencies to defend themselves from criticism (Kühl 2009).

In short, the CD studies have focused too narrowly on donors’ inputs and activities for relatively short periods of specific projects.

Considering these limitations, the author, in cooperation with her associates, redefined the concept of CD in an article published in 2010 (Hosono et al., 2010). In this article, they regard CD as being characterized by the following four features: (1) it is a long-term, endogenous process; (2) it is a holistic process encompassing multiple, interlinked levels of society; (3) it contains both specific technical capacities as well as essential core capacities; and (4) external actors cannot create capacity but can only provide a support to the local CD processes. They also identified five CD “factors”, which are mutually reinforcing and strengthen stakeholders’ capacity: (1) stakeholder ownership defined as the awareness, commitment, motivation, and self-determination of people and groups involved, (2) specific drivers (which make advance the CD process) such as leadership, management system, incentive mechanisms, organizational culture, and contextual (social, political, or economic) transformation, (3) mutual learning (among stakeholders including donors) which is central to the endogenous CD process and to the discovery of innovative solutions that address the needs of beneficiaries and other stakeholders, (4) scaling up through institutionalization of good practices, and (5) external donors serving as a catalyst of CD processes by providing financial resources and related knowledge, and by securing the space for policy dialogue and civic engagement.

Written for the purpose of applying our framework to a deeper analysis of endogenous CD process, this paper will attempt to explore what foreign donors can learn about CD through tracing an endogenous and long-term CD process from insiders’ perspectives. As the case study, this paper examines an urban redevelopment project called MIB (Mejoramiento Integral de los Barrios or Integral Slum Improvement) of the Medellin City of Colombia.

The author judges that this project is worth studying because MIB satisfies the four CD features identified by Hosono et al. (2010). First, MIB was accomplished through a long period of preparation and implementation. It took more than 10 years before the initial idea was fermented to be ready for scaling-up. The process stretched beyond the time horizon normally dealt with by a single development assistance project. The case is therefore appropriate to examine how the endogenous CD process proceeded beyond individual projects.

Second, MIB went through a holistic process encompassing multiple, interlinked layers of stakeholders, covering not only individual and organizational capacities, but also the improvement of enabling environments such as national and regional policies and programs.

Third, the case is interesting because many related organizations, policies, and programs were involved in the process, and consequently the implementing body had to develop not only specific technical capacities for construction works, but also core capacities for planning, coordination, and conflict resolution.

Fourth, the MIB was mostly planned and implemented by individuals and organizations of Colombia.

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3 Ten principles include “don’t rush,” “respect the value system and foster self-esteem,” “establish positive incentives,” “build on existing capacities rather than creating new ones,” and “stay engaged under difficult circumstances.”
4 Core capacities are defined as generic and crosscutting competencies and the abilities to commit and engage, to carry out functions or tasks, to relate and attract resources and support, to adapt and self-renew, and finally, to balance coherence and diversity (Baser and Morgan 2008).
5 Although municipality is the exact category, the author uses the term “city” in this paper. Medellin is a city of 2.2 million inhabitants at the center of the Metropolitan Area of the Aburrá Valley in the Antioquia Department, which is the second largest in the country. The city is located in a hilly countryside of the Colombian Andes and is currently a major industrial center, leading the national energy production, as well as banana, coffee and gold markets.
itself. External assistance did play a role, but only in the sense that memories and records of external assistance offered in the past served as “savings” for contemporary planners and practitioners. Since the MIB has been only indirectly supported by external aid providers, we can expectedly trace the endogenous process in a clear and straightforward way. It may thus contribute to clarifying the kind of roles to be played by external actors in the future CD process.

Furthermore, the MIB has been featured in domestic and foreign mass media and in foregoing academic literature on urban planning as an outstandingly successful case of inclusive redevelopment of urban slums. However, it has been analyzed neither from a long-run perspective covering several decades nor in the context of CD. The purpose of this paper is exactly to analyze the MIB as a CD fostering endeavor stretching over a long period of time.

An open-ended interviewing with the stakeholders was the principal research method in this paper. It was conducted in August - October 2010 as well as in February, May and July 2011. Maximum efforts have been made to triangulate the information collected by interviews. However, since written materials are scarce, the author must acknowledge the possibility of information bias.

This paper is structured as follows. Section 1 will introduce the outline of the MIB and then describe its six consecutive phases. Section 2 is dedicated to the analysis of the CD process focusing on the five factors mentioned in Hosono et al. (2010). Finally, concluding remarks follow to share implications for future research and practice on CD.

1. Tracing the MIB process: facts, initial context and the process at each phase

The process in which the idea of urban redevelopment in Medellin was fermented, planned, and implemented can be chronologically divided into six phases. Phase 1 started in the 1980’s, when relevant institutional transformations happened and the awareness of urban problems spread. Phase 2 was between 2000 and 2004, when the idea of MIB was first conceived. The actual planning of MIB for Juan Bobo proceeded in Phase 3 (2004-2006). In the following Phase 4 (2006-2008), construction works were implemented and, in Phase 5 (2008-2009), people resettled themselves in the new or renovated residences. Phase 6 is the post-project period in which similar projects have been implemented in other places and the Juan Bobo project site is frequently visited by domestic and international observers and practitioners. To these six MIB phases, we can add a pre-MIB period (1950s-1970s) in which the initial context of urbanization and poverty was formed in Colombia in general and in Medellin in particular but the awareness of the problems was not yet externalized.

1-1. Overview of the MIB in “Juan Bobo”

MIB was designed, coordinated, and implemented by EDU (Empresa de Dessarrollo Urbano) between 2004 and 2008 in Comuna #2 in the Northeastern zone of Medellin. The area is called Juan Bobo (See Figure 1). The project targeted the dwellings which had settled along the banks of Juan Bobo stream, with a population of 1,353 (300 families) and the land of 1.75 hectares. MIB is a part of the PMIB (Integral Slum Improvement Program) (PMIB), a city program which attempted at integral slum redevelopment between 2004 and 2007. The project goals were 1) applying the efficient and flexible planning procedure based on technical criteria adjusted for each micro-territory, 2) fostering community consensus and participation in generating secure co-living conditions, 3) improving the whole neighborhood by securing proper financial resources, 4) improving and legalizing residences on the basis of an analysis of the demographic dynamics, and 5) recovering degenerated land and environment to help the on-site resettlement. The total budget was close to US $4 million (Alcaldia de Medellin 2011). There were three project components; 1) physical components (construction or improvement of houses, public space creation, infrastructure development), 2) social components (community organization and participation, workshops,
trainings), and 3) institutional coordination (NGOs, construction companies, and universities involved) (Blanco 2009). No household was gentrified because of the project and every household was either relocated to new residence or returned to the renovated residence. The details of the project are presented in Appendix I.

Although direct cause-effect relations cannot be proven, we have observed in the Comuna #2 the improvement of Human Development Index between 2006 and 2009 (Figure 2) and homicide rates between 2002 and 2007 (Figure 3).

**Figure 1: The MIB project site** (Source: EDU)

![Figure 1: The MIB project site](image)

**Figure 2: Human Development Index of Medellín City & Comuna #2**

![Figure 2: Human Development Index](image)

Source: Rivas 2011, p45.

**Figure 3: Homicide rates in the Medellín City**

![Figure 3: Homicide rates in the Medellín City](image)

Source: Alcaldia de Medellín.

*The data is not exclusively for Comuna #2.

1-2. Initial Context: Urbanization and Poverty in Colombia and Medellin from the 1950’s till the 1970’s

Urbanization in Colombia and formation of slum areas commenced in the 1930’s, and accelerated from the 1950’s because of industrialization and the mass migration due to the civil conflict between 1948 and
The rural-urban migration to the Medellin City started in the early 1900’s, but quickened after La Violencia. The city’s population, which had been 120,044 in 1928, almost tripled by 1951. Almost 600,000 people further migrated to the city during the 1960’s, and its population reached 2.2 million during the 1980’s (Alcaldia de Medellin 1996).

The city started losing its industrial advantage from the late 1960’s, which resulted in the downgrading of employment and the growth of the informal sector in and around the city. This socio-economic deterioration incubated “alternative” forces such as the Medellin drug cartel, paramilitary and guerrilla groups and multiple other criminal organizations during the 1970’s and 1980’s (Betancur 2007). In the context of the urban conflict, illegal recruitment became a covert form of human trafficking controlled by armed groups, leading recruited youths to undertake high-risk activities for exploitative purposes. The northeastern parts of the city, which are called Comuna #1 and #2, thus became the poorest and isolated areas from the rest of the city, stigmatized for being one of the most dangerous areas full of drug trafficking and gang activities. Environmental and safety problems (such as landslides in the rainy season), contamination of the main streams, and continuous expansion of overpopulated squats were equally troublesome (Blanco 2011:47).

People started to immigrate to Comuna #2 (which includes Juan Bobo, the MIB implementation site) in the 70’s and construct shacks with woods and trash materials. The population became very dense in the 80’s, which forced people to construct houses on the stream bank of Juan Bobo, without proper infrastructure such as electricity and safe water. 80% of the houses had structural and functional deficiencies; one-third were located in the riverbed restricted areas. Lack of legal tenure also affected the supply of basic services; 50% of the water supply and 35% of power supply were obtained illegally (Rivas 2011: 43). There have been very few community organizations and volunteer activities in the Comuna #2 and little trust in the government due to so many unfulfilled pre-election promises (Rivas; 2011:47).

Regarding security, the homicide rate of the city reached 381 per 100,000 residents in 1991, which was the highest in the world (Perez 2011 92). The security and poverty problems were long recognized by the city government, especially from the late 1980’s although financial conditions did not allow the mayors to launch an integral and continuous slum redevelopment project (Rivas 2011).

1-3. Legal transformation, city plans and awareness enhancement in the 1980’s and 1990’s (Phase 1)

The urban rehabilitation with strong participatory components became a shared agenda in the 1980’s and 90’s among Colombian policymakers and was institutionalized in the 1990’s. In the 1980’s, the Medellin city implemented a rehabilitation project at the Moravia dumping site (details to be described later), targeting the marginalized population for the first time. Another program was CEHAP-PEVAL(Centro de Estudios sobre Hábitat Popular -Programa de Estudios de Vivienda en América Latina), a popular-habitat program planned at the National University of Colombia in Medellin. It commenced in 1981 with the

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11 A period of civil conflict in the Colombian countryside between supporters of the Colombian Liberal Party and the Colombian Conservative Party. More than one-third of the rural Colombian population under the age of 40 in 1951 had left the areas by 1964 and in the 1970’s (Martine1975: 193).

12 The Medellin Cartel was an organized network of “drug suppliers and smugglers” originating in the city of Medellin, Colombia, which was run internationally. By 1993, the Colombian government, helped by the US, had successfully dismantled the cartel by imprisoning or hunting and gunning down its members.

13 Paramilitaries in Colombia refer to the origins and activities of right-wing paramilitary groups in Colombia during the 20th century, considered to be most responsible for human rights violations in Colombia.

14 Such as FARC(Revolutionary Armed Forces of Colombia) and ELN(National Liberation Army).

15 Centro de Estudios sobre Hábitat Popular -Programa de Estudios de Vivienda en América Latina
support of the Netherland government and technically assisted by IHS (Institute for Housing and Urban Development Studies)\textsuperscript{16}, a Netherland-based international center in the fields of urban management. The program aimed at offering solutions to human habitat especially for slum communities by conducting studies, offering international seminars, and managing pilot projects (http://www.agora.unalmed.edu.co/principal/canal1/escuela.htm).

In the 1990's, there were a series of national legal transformations concerning urban planning. In 1991, Constitution was amended to enhance autonomy of local governments in administration, planning and promotion of economic and social development (Gonzalez et al 2009). After this event, in the field of urban planning, the Law \#3 (Housing System) was enacted in 1991 to provide housing subsidies. In 1993, the Law \#99 was adopted to stipulate environmental obligations. The Law \#152 (Development Plan) was issued in 1994 and the Law \#388 (Territorial Orders) was enacted in 1997, emphasizing inclusive cities, citizen participation, ecological consideration, and equal distribution of benefits and costs (Rivas 2011).

After the issuance of these national laws, City Development Plan (1996), POMCA (Plan de Manejo y Ordenamiento de una Cuenca: (Integral Micro catchment area Plan) \textsuperscript{17}(1999) and POT\textsuperscript{18} (Plan Ordenamiento Territorial: (Territory Ordering Plan)) (1999, revised in 2006) and PP (Plan Partial (Partial Plan))\textsuperscript{19} were drafted by DAPM\textsuperscript{20} of the Medellin city government, and some of its staff were trained in the methodologies and application of territorial ordering\textsuperscript{21} (ibid). After the POT was adopted in 1999, the city government started to consider constructing a public transport system which would also benefit slum communities. The city administration included a construction plan of MetroPlus (Rivas 2011) which was later constructed as MetroCable in 2002, dramatically improving slum residents’ mobility.

During the same decade of 1990’s, PRIMED (Programa de Mejoramiento Integral de Barrios Subnormales) \textsuperscript{22}(1992-2002), a large slum infrastructure development and housing improvement program, was implemented in Medellin. The project was technically and financially supported by KFW, UNDP and the National Government. It was implemented in the 3 zones (15 comunas) of the city, spending US $2,940 per household (Betancur 2007). In addition to financial and technical assistance, the donors contributed to the documentation of experiences including feasibility studies. At the community level, CODEVI (Corporación de Desarrollo, Educación y Vivienda), a well-known NGO for popular housing, worked in Comuna \#1 and \#2.

As for citizens’ awareness in general, the issue of poverty and violence became a shared social concern in the 1990’s, partly because of mass-media reports. According to Rivas (2011), local films such as “No Future (1990)” and “The Rose Seller (1998)” described the life and its subcultures in the comunas. Also, a television program called “Arriba mi Barrio” (currently called “Camino al Barrio”) began in 1991, which has been on the air for 20 years until today. Community leaders themselves felt that the situation was problematic, but could not organize themselves, get their voices heard and tackle the problem, since they were caught up in the daily calamities and violence happening in front of them.

Finally, in 2002, the area became a target of Operacion Orion, anti-drug military intervention, organized by the national government with strong initiative of the president Uribe, who was once mayor of the Medellin City. The homicide rate nearly halved after this intervention.

1-4. Conception of the MIB idea in 2000-2004 (Phase 2)

Ideas leading to MIB were fermented at the Archquitectura and Urbanism Laboratory (LAUR: (Laboratorio de Arquitectura y Urbanismo (Arquitecture and Urbanism Laboratory))) \textsuperscript{23}of the Pontificia Bolivariana University (UPB: Pontificia Universidad Pontificia Bolivariana (University of Bolivariana Pontificia))\textsuperscript{24} although the notions and practices of inclusive urban development had been long discussed and accumulated at CEHAP-PEVAL as mentioned in Sub-section 2-2. LAUR is an investigation unit founded within UPB in the early 2000’s, and has been involved in urban redevelopment projects of the Medellin city and surrounding cities as well as in the Urban Legalization and

http://www.agora.unalmed.edu.co/principal/canal1/escuela.htm. The program has been renamed a couple of time from its foundation.

\textsuperscript{16} Institute for Housing and Urban Development Studies. http://www.ihs.nl/

\textsuperscript{17} Integral Micro catchment area Plan

\textsuperscript{18} Plan Ordenamiento Territorial (Territory Ordering Plan), a master plan for urban planning

\textsuperscript{19} Plan Partial (Partial Plan), actual implementation plan under POT

\textsuperscript{20} Departamento Administrativo de Planeacion de Medellin

\textsuperscript{21} Including urban redevelopment and land readjustment based on Japanese experiences Country Focused Group Training Course “Land Readjustment Project for Colombia (1998-2003) and Group Training Course “Urban Planning and Land Readjustment” (2003-2007), supported and funded by Japan International Cooperation Agency (JICA). The participants stayed in Hokkaido Prefecture and learned about inclusive urban planning as well as territorial ordering called Kukakusui.

\textsuperscript{22} Programa de Mejoramiento Integral de Barrios Subnormales

\textsuperscript{23} El laboratorio de Arquitectura y Urbanismo (Arquitecture and Urbanism Laboratory)

\textsuperscript{24} La Pontificia Universidad Bolivariana (University of Bolivariana Pontificia)
Regularization of Belén Rincón project in the Antioquia Department (Rivas 2011). Their works on zoning, public space, urban renovation, housing, and integral improvement drew broad attention. LAUR was founded under the influence of international discourses on urban planning. From the 1990’s, there has been emerging international discourses in urban/spatial planning to create sustainable and inclusive cities, where four principles of social urbanism were emphasized: citizen participation, consultation with experts, fair representation, and the appeal to act as advocates for collective decision-making and for the improvement of the affected community (UNECE 2008: ix).

In the early 2000’s, there were several encounters among key persons at LAUR. They shared common concepts and experiences of inclusive city development, especially in low-income areas. They are people who later got involved in EDU and MIB. Alejandro Echeverri, the first general director of EDU, had finished his doctoral degree in Spain and joined LAUR. He had strong interest in redevelopment of hillside slum communities, which was the main theme of his dissertation (Interviews with Alejandro Echeverri: 24th of June 2011 and 10th of February 2012). He took initiatives to install a laboratory in the northern part of the city to conduct field studies and held the first series of workshops and discussions on situations of urban slums and alternative solutions. Juliana Portillo, who would later become the coordinator of the MIB at EDU, had written her dissertation about the urban slum redevelopment project in Medellin (Interviews with Juliana Portillo: 24th of June 2011 and 10th of February 2012), sharing interest with Echeverri.

The period between 2000 and 2004 overlapped with the period in which Sergio Fajardo, the mayor who would decide to implement MIB, was preparing for the mayoral election. He originated from Medellín and as a journalist, had strong awareness of the issue of poverty and violence in the slum communities. Fajardo heard about LAUR from a faculty of the Architecture Department of the UPB, and one day stopped by to talk to Echeverri and ask him to help draft a city development plan (Interviews with Alejandro Echeverri: 24th of June 2011).

In 2002, a public gondola-lift transport system called Metro-cable K line was inaugurated in Comuna #1 and #2, providing a 7-minutes service connecting hillside neighborhoods of Northeastern Medellin with the Medellin metro system, benefitting approximately 170,000 residents (Cañón-Rubiano, 2010). This event happened to feature Comuna #1 and 2 as the areas whose living conditions were the lowest in the city and needed public interventions for improvement (Figure 5). Thus, the blueprint of MIB came to be included in the draft of the city development plan.

**Figure 5: Quality of Life and Human Development Index in Medellin, 2002**

Source: Alcaldía de Medellín 2004

1-5. Planning the MIB project in 2004-2006 (Phase 3)

**Formation of the project team**

After Fajardo was elected as the mayor in 2004, the plan became the formal city development plan\(^25\), and Echeverri was appointed the first director of City’s EDU, an autonomous urban development corporation \(^26\) (Rivas 2011). It should be noted that the MIB project started to be implemented in the first

\(^{25}\) el Plan de Desarrollo 2004-2007 “Medellín, Compromiso de Toda La Ciudadanía”

\(^{26}\) EDU was founded in 1993, as an industrial and commercial organization to construct the San Antonio Park under the national
year of Fajardo’s term of office, indicating his strong leadership and interest in the matter.

Echeberri assigned some of his colleagues to the job of designing the MIB project. One of them was Carlos Montoya, who became the Director of Housing and Habitat of EDU and supervised the project from the planning to the end. He had been working for several major slum redevelopment projects in Medellin (ibid). He received education at CEHAP-PEVAL of the National University in Medellin (see 2-2). After graduating from the university, he participated in 1983-1987 in the rehabilitation project of the Moravia open garbage dump site where he experienced inter-institutional coordination to relocate 173 houses constructed along the steep riverside. Through direct negotiations with the residents, Montoya, with technical support of a sociologist, Montoya introduced a Certificate for Mutual Assistance by which people were given land ownership in exchange with their cooperation to help construct their own houses and community. Montoya recalled that he learnt to implement projects in flexible ways depending on actual situations instead of relying on pre-fixing plans. He also noticed that new settlers intruded in the rehabilitated areas and informally constructed shacks again. In 1990, he participated in a KfW-financed international seminar on integrated slum redevelopment in Quito, Ecuador and exchanged his experiences with other specialists. The discussion at the seminar was published as a manual available for managers of similar projects. Subsequently, he participated in the PRIMED project (1992-2002), which also included housing improvements and relocations with community participation. PRIMED was a large project whose implementation followed a rather fixed, pre-planned schedule. Through those experiences, Montoya understood that there are two different modes for implementing urban redevelopment projects: process-oriented and plan-oriented. He also learnt how to conduct interdisciplinary and inter-institutional urban projects. His cooperation with NPOs further taught him how to facilitate community participation and educate its residents (Interviews with Carlos Montoya: 24th of June 2011 and 10th of February 2012).

Under Montoya’s supervision, the MIB project was gradually shaped. First, international policy documents regarding inclusive cities were reviewed and four priorities were identified: local actions, housing for all, risk prevention, and minority inclusion. Second, in cooperation with the city government, the team also made a census of 6000 houses in the North Eastern part of the city. Finally, Juan Bobo was selected for the project site.

Afterward, project components (physical, social, inter-institutional) were determined and an interdisciplinary team was formed27, both modeled on Montoya’s Moravia and PRIMED experiences (ibid). In selecting the team members, Montoya and Portillo identified, during the field research in the Comuna #1, candidates who had capacities to work for popular housing in slum communities. The size of the team was flexible and changed throughout the project, some being in-and-out, and the others worked intensively on particular phases of the project. The team members’ TORs have been gradually fixed through the process of social learning, depending on each member’s strength (Interviews with Juliana Portillo: 10th of February 2012).

Rapport building and Social learning

Under Portillo’s coordination and Montoya’s supervision, team members visited households daily, especially in the first two months. They started from walking and looking around in the community, then having casual conversations with the residents, measuring roads and taking soil samples, telling the residents that they would come back later (Focus Group Discussions with residents: 24th of June, 2011, 10th of February 2012). Montoya wanted his team to have enough time of social learning to know the community through “field work”, as well as to identify who would become active participants in the project. After getting to know the area, the MIB team members conducted interviews with residents of each household, to understand the number of residents in each household, their background and livelihood, whether they had property rights or have paid taxes and utility fees and so on, as well as making a rough sketch of each house (ibid). Subsequently, they started taking a formal census of each household to double-check the information taken from the interviews, to gain a more detailed understanding of the residents’ living conditions (ibid).

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27 Bonos de Ayuda Mutua, developed by the Sociologist Luis Fernando Londoño Nicols (Rivas 2011). A virtual wage was calculated based on the national minimum salaries.

28 The team was consisted of seven occupations and 19 members though not all the members dealt with the whole process; Assisting Director of Housing and Habitat (Carlos Montoya), Coordinator (Claudia Juliana Portillo Rubio), Social Group (Paula Ospina Uribe, Juan Miguel Pulgarin, Cruz Mery Bahos), Lawyers (John Jairo Lopez Yepes, Sandra Escudero Yepes, Juan Carlos Alvarez), Structural Engineers (Alvaro Diaz Pauar, Francisco Trujillo Mesa, Ramon Enrique Castro Perez, Viviana Gonzalez Gonzalez), Architects (Francescho Oscar Montoya Gonzalez, Alex Correa Guitierrez, Giovanny Marin Silva), and Civil Engineers (Wilder Sneider Salinas, William Suarez Capacho, Oscar Espinel).
The team members have thus tried to build rapport and trusting relationships with the residents as they were aware that without this they could not realize the MIB project. It is noteworthy that the residents still remember the first names of the MIB team members. They witnessed the team first coming to look, talk, and listen before starting negotiation about relocation (Interviews with residents: 24th of June, 2011). Montoya expressed “negotiation and rapport, not imposition, was the most fundamental “tool” of the project so that people would have ownership”. (Interview with Carlos Montoya: 24th of June, 2011). Sociologist Javier Jaramillo, who currently runs MIB projects in several locations in the Metropolitan areas of Medellin, also pointed out that micro-politics, favor-ism and information manipulation were usual practices in slum communities, but now it is important to gain people’s trust through equal-footing dialogues (Interview with Javier Jarallimo: 25th of June, 2011). “It must have been an epoch-making event for people to be listened to, spoken with and visited so frequently since they kept feeling abandoned by the rest of the city for a long period”, a community leader said (Interview with Mr. Elkin Zapata: 14th of February, 2011).

**Making agreements with the residents**

Subsequently, the team invited the residents to meetings to exchange opinions and reach a consensus on the project, including the geographical limitations and timelines (Interviews with Juliana Portillo: 24th of June 2011, 10th of February 2012). These meetings were often organized at night time on the weekends and MIB staff invited all the residents. The staff even visited households whenever they were asked for further explanation and discussions (ibid). During the meetings, the team members suggested the best options from their analysis and asked people to show “yellow cards” when they thought they were off-track (Interview with Carlos Montoya: 24th of June 2011, 10th of February 2012). The members also asked the residents to express how they wanted to change the community in details; how the roads, houses and public spaces should look compared with what they actually had (ibid.). The team sometimes made rough sketches in front of the residents to visualize their images. The team also visualized how the new community would look like and listened to residents’ views (See Figure 2). At this time, a housing committee was formed to deal with all the paperwork to get public subsidies and apply for housing titles (Rivas 2011.)

Finally, an assembly was held to geographically define the project area. Agreements were also made on the following points: (1) nobody would be forced to leave and all would be resettled in Juan Bobo, (2) EDU would not provide the same treatment to new squatters, and (3) There would be no more DIY house construction or improvement. The interviewed residents testified that those pacts actually worked as a strong guarantee that they could certainly come back to the community (Rivas 2011).

**Figure 6: Juan Bobo project area and variations due to topography**

[Image of Juan Bobo project area and variations due to topography]

(Blanco 2009:58)

**Getting into details**

After the assembly, the MIB team further elaborated the plan and explained to the residents that 120 houses (colored yellow, orange, and brown in Figure 7) that needed more than 60% replacement and the houses constructed on the riverside would be completely rebuilt while 140 houses (colored green) that needed less than 40% replacement would be improved instead of rebuilt. The team also made agreements with the residents with regard to construction of public spaces such as parks, gully redevelopment, public services and the bridge to connect the community (Rivas 2011). The staff used visual images so that the residents could easily imagine how the community would be transformed (ibid). After the residents accepted the project plan, the team asked the residents to organize three more committees (risk prevention, environment, and children). It also helped them apply for subsidies (national, regional, and city, covering...
approximately 70% of the construction costs) based on the Law #3 (ibid). The MIB team and the residents, at this point, also introduced publicity boards to inform the progress of the project and share concerns and suggestions. The boards are still used today (ibid).

At this phase, EDU contracted a NGO named CODEVI, to design each house for housing improvement. As each household had various needs and preferences, designing must be done quite differently. Temporary relocation commenced, with an average duration of approximately one year (Rivas 2011). Finally, the detailed designs of each house and new buildings as well as public spaces were completed and eight construction companies were selected for the new construction. Apart from the contractors, around ten organizations participated in providing financial or technical support29.

**Figure 7: variations of house construction materials and houses for replacement/improvement**

![Variations of house construction materials and houses for replacement/improvement](source: EDU)

(Left: brown: hut with temporary resource, Orange: hut with bricks, Beige: brick houses)
(Right: yellow, orange, and brown for replacement, green for house improvement)

1-6. Construction in 2006-2008 (Phase 4)

After the construction started, the residents offered their working hours equivalent to 10% of the subsidies in the form of offering labor for construction, cleaning the site and protecting the contractors from any obstruction (Interviews with Juliana Portillo: 10th of February 2012). At this moment, the MIB team mediated the process to decide which household took which apartment compound (ibid). Although the residents agreed to disabled people or the elderly taking the ground floor, the rest of households could not easily reach consensus and but finally agreed to use lottery arbitrated by the team (Interviews with Juliana Portillo: 24th of June 2011, 10th of February 2012).

The MIB team installed a construction information center so that people could stop by and make any inquiry as well as organize cultural activities such as plays, workshops on social environment and kitchen gardens, cleaning and environmental campaigns, as well as meetings to elaborate a manual of co-living to share values and rules in the new community after the construction (Rivas 2011). According to interviews with the residents, during this period, the residents sometimes felt worried especially when the construction work fell behind schedule. But in such occasions, they would visit the construction sites, and understood

29 These organizations include; the Secretary of Social Development, and FOVIMED(El Fondo de Vivienda de Interés Social del Municipio de Medellin) - FOVIMED, AREA (Area Metropolitana) - AREA, EPM (Medellin Public Enterprises Empresas Publicicas de Medellin)-EPM, VIVA(Empresa de Vivienda de Antioquia) -VIVA, the Ministry of Environment, MAVDT (Ministerio de Ambiente, Vivienda y Desarrollo Territorial) -MAVDT, and, FONVIVIENDA(Fondo Nacional de Vivienda), and others from different sectors and levels of government (Rivas 2011:139).
that their houses were being renovated, and convinced themselves that they would get a place to live and not be gentrified (ibid).

1-7. Resettlement in 2008-2009 (Phase 5)

After the construction was finished, the residents started coming back to the community. Most of their houses were not only renovated but dramatically improved, with more floors, yards and balconies, and public spaces (Focus Group Discussions with residents on 24th of June 2011). In February 2008, the newly elected mayor Alonso Salazar hosted an inauguration ceremony for the new apartments. But there was a series of follow-up activities after the ceremony to support relocation. The EDU, especially the social group composed of sociologists and social workers, worked as facilitator who supported the people to feel resettled, especially for those who moved into the apartments. The team mediated the process of rule setting and the manual elaboration, which was distributed to each household (Rivas 2011). Simultaneously, the team facilitated the process of formalization of property rights of each apartment compounds (ibid). The residents renamed the renewed community “Nuevo Sol de Oriente (New Sun of the East)” and gave a specific name to each new building (Interviews with social worker Marco Gamboa and Mary Bao: 24th of June 2011). They also decided to recognize the people who showed strong leadership during the project process as the community leaders (ibid).

As for the outcome of the project, apart from the macro-level index improvement mentioned in Subsection 1-1, many impacts were felt or experienced by the residents. For instance, an Impact Assessment Survey on Socio-Spatial influences applied to more than 150 beneficiary families demonstrated a remarkable transformation in the community’s trends of behavior in relation to the environment and their notion of security. The interviewed residents felt greater security in the area as the risks of floods, contamination and violence in general have radically diminished. They ranked pedestrian pathways, the bridge across the Juan Bobo stream and public stairs as the top three public infrastructures built by the project (Blanco 2009). Many residents now feel that the community has become much safer and cleaner and their housing conditions have physically improved (Focus Group Discussions with the residents on the 24th of June, 2011; Interview with Mr. Jonás Mena on the 25th of June, 2011).

1-8. Post-Project from 2009 till the present (Phase 6)

MIB can be counted as an epoch-making project for the Medellin city. The notions and concepts of MIB have also been shared by many visitors to the project site. From 2010 on, a training course on urban planning and land readjustment has been offered in Medellin to Latin American trainees. The Juan Bobo project site is frequently visited by the participants as a good example of urban slum redevelopment with community participation and inter-institutional coordination. The course has been given by former Colombian participants to the JICA training program on urban development held in Obihiro, Japan. They have developed their networks and skills and are now running their own training sessions in Colombia.

In spite of this positive prospect of scaling up beyond the national borders, there remain several concerns about the sustainability of the project.

Regarding the Juan Bobo MIB, the following problems emerged in the focus group discussions conducted on 24th of June, 2011. First, there were people whose houses were excluded from the MIB while their neighbors became beneficiaries. This generated tensions among residents. Second, many residents feel that social ties with families and neighbors have been weakened. Third, there is an issue of property rights. Some families have received unofficial documents, not the title deeds, due to the long duration and complex paperwork. Fourth, as their houses are now registered, the residents needed to pay tax and utility fees even though their income has not changed or has even declined. Fifth, there is still a problem of bad smell coming from the small river running through the project area as upper-hill communities still do not have a sewage system and people are still dumping trash into it. It is to be seen how far the beneficiary population was empowered or has developed its capacities to maintain the renovated communities and buildings as well as to deal with remaining or emerging issues.

Beyond Juan Bobo, geographic scaling up of the project has been observed around Medellin. Five MIB projects have been either planned or implemented in Juan Bobo #2, La Herrera, Santo Domingo, La Cruz, and La Onda (Rivas 2011, see Figure 8). In the broader Medellin metropolitan areas, there have been seven MIB projects indicated in the map (ibid). However, methodologies used in the new sites were quite different from the ones used in Juan Bobo. Institutionally, the PMIB has been transferred from EDU to ISVIMED (Instituto de Vivienda y Hábitat). The latter has a strong focus on construction of new houses and utilities. Social

30 There was a pre-inauguration by the mayor Fajardo before his term of office finished.
31 “Urban Planning System and Land Management Instruments” (2010-2012) organized by the National Planning Department.
32 The author could not find out possible micro-political reasons (e.g. self-exclusion or social exclusion among people) behind the decision of project area, which should be further examined.
33 Instituto de Vivienda y Hábitat
components and public space creation, major innovations in the Juan Bobo project, are now less emphasized.

Figure 8: MIBs in other communities in Medellin and its metropolitan areas

2. Analysis of the MIB process: What findings can be drawn from the tracing of the MIB process?

In this section, the MIB process described in the preceding section will be analyzed in accordance with the five CD factors identified by Hosono et al (2010): (1) stakeholder ownership, (2) specific drivers, (3) mutual learning, (4) pathways to scaling up, and (5) the role of external actors.

2-1 Stakeholder Ownership

Various organizations have been involved directly or indirectly as stakeholders during the whole MIB process: PEVAL-CEHAP, LAUR-UPB, EDU (including MIB team), the municipal government, CODEVI, JICA, KfW, UNDP, IHS, National Government, FOVIMED, AREA, EPM, VIVA, the Ministry of Environment, MAVDT, FONVIVIENDA, the beneficiary residents, and many others. Obviously, the MIB team of the Medellin City and Mayor Sergio Fajardo demonstrated strong ownership, but it is doubtful whether EDU (the organization to which the MIB team belongs), the municipal government as a whole, and the beneficiary population shared the same degree of ownership. The discrepancy in ownership probably affected the project process and its sustainability.

However, the success of the Juan Bobo project is due to a common interest in the creation of an inclusive city as a solution to urban poverty. All stakeholders, regardless of different degrees of their ownership, shared the belief in social urbanism, which helped difficult and complex coordination during the planning and implementation phases of the project.

2-2. Specific Drivers

There were three major drivers which made advance the MIB process in Medellin: (1) initiatives and skills of specialists and political leaders, (2) enabling policies and plans, and (3) other environmental or coincidental factors.

As a specialist, Montoya’s role as the supervisor of the project was extraordinary. Equally important was Mayor Fajardo’s political leadership. It is the mayor who decided to implement MIB in the city and assigned LAUR staff to EDU, the MIB implementation body. In the EDU, Echeverri had helped draft a city plan, of which the MIB was born. Portillo coordinated the highly complicated MIB planning and

http://www.medellin.gov.co/irj/portal/ciudadanos?NavigationTarget=navurl://885fc1028a0b78782186f5b7d68eccc34
implementation process in which various organizations and several budgetary sources were involved. At the community level, CODEVI, a well-known NGO for popular housing, played an important role as a contractor which designed each house in harmony with general improvement of the community. It took advantage of the close relations it had established with residents through their prior activities in the area. In short, vibrant political leaders and specialists, with prior networks among themselves and with the residents, played a crucial role as drivers of the MIB process.

The second specific driver is the enabling policy environment. Following the amendment of Constitution in 1991, four major laws related to housing and urban development -- Law #3 (for housing system), Law #99 (environmental considerations in land development), Law #152 (for development planning), and Law #388 (territorial orders) -- were promulgated at the national level between 1991 and 1997. In Medellin, City Development Plan (1996), POMCA (1999) and POT (1999, revised in 2006) and PPs were drafted. The City Development Plan helped justify the MIB while a part of its budget was filled by national, departmental and city subsidies granted under the Law #3. New institutions also influence public awareness. The POT was followed by the construction of MetroCable, which in turn featured dilapidated conditions of Comuna #1 and #2 and called for further public interventions.

Third, there were several contingent drivers which served as additional enabling environments. For instance, financial conditions of the Medellin City happened to be sound and enabled the city government to make a substantial financial contribution to the MIB program. This is important because the national and departmental subsidies for house construction, though substantial, was not enough to cover the expenses necessary for construction, the hiring of specialists at EDU, and related administrative works at the city government. The city has been known for its outstanding public finance performance from 2000 (Gonzalez 2009). Another contingent factor was the media coverage of urban poverty. It greatly contributed to raising public awareness on the issue. Additionally, the military intervention called Operacion Orion helped draw attention to the urban issues of the city. It also helped improve security situations of the area, facilitating the project implementation later.

2-3. Mutual Learning and Innovative Solutions

Various outputs resulting from mutual learning among stakeholders can be observed from Phase 2 (Conception Phase) to Phase 5 (Resettlement). It is noteworthy to point out that the MIB team played different roles in mutual learning at each stage. Their learning counterparts also shifted, but innovative solutions were found out at each stage to make the process moving forward.

At Phase 2 (Conception Phase), learning occurred among LAUR researchers and between the researchers and politicians/staffs of the city government. Especially at LAUR, from which MIB staffs would be recruited, there were a couple of innovative field experiments that contributed to crystalizing the idea of inclusive urban development. At this phase, the MIB staff-to-be served mainly as engineering specialists.

At the planning stage, communications between MIB staff and residents started. The MIB staff now functioned as social workers walking in the community to get basic information and building rapport with the residents. Subsequently, actual town designs were sketched and put into real plans through conversations between the staff and residents. At this point, consensus was reached with regard to the basic rules of project implementation.

When the actual construction commenced, the MIB team mainly played the role of coordinator. The members facilitated the residents to discuss how to administer the new town-to-be and offered training courses and workshops on environment-friendly manners of living and skill development for income generation. The project staff also coordinated activities of ten or so organizations (public agencies, private firms, NGOs).

At the resettlement phase, the MIB team members became facilitators, helping the residents to set rules to manage apartments and live in harmony.

2-4. Pathway to Scaling Up

Although attempts have been made to scale up the Juan Bobo project domestically and internationally, there are two constraints affecting sustainability of the project at the last phase (Phase 6). One is the sustainability of the Juan Bobo project itself. The other is the replicability of the PMIB model developed at Juan Bobo.

Before anything else, the sustainability of the Juan Bobo project requires that beneficiary residents demonstrate ownership and initiative to solve remaining problems. Among such issues are how to remedy the social tension created between benefitted residents and those outside of the project area, how to collectively manage apartment buildings, pay taxes and utility fees, and how to reduce water contamination and bad odors of the stream. The solution of these problems requires common efforts by the residents. They seem to lack enough capacity for such works and still need external facilitators to help them tackle the
problems

Regarding replicability of the MIB, contradictions or lack of coordination among institutions are observed as main constraints. First, it is unclear how the three city plans (development plan, micro-catchment plan, territory ordering plan) elaborated under the different laws are combined with one another. In the case of MIB, it was strongly connected with the city development plan, but was not necessarily in alignment with the other two plans, especially with the territory ordering plan. As the city development plan can radically change, depending on the policy of elected mayors, it would be desirable that the PMIB be closely integrated with the other two plans, as the latter is less politically driven.

The second issue is friction between the two distinct approaches to urban redevelopment taken by different organizations: the process-oriented or plan-oriented approaches. At Juan Bobo, EDU took the process-oriented and labor-intensive approach. This approach, however, was not succeeded by ISVIMED, when the PMIB was transferred from EDU to this organization. ISVIMED’s work style is to construct new buildings on the basis of nationally determined goals and blueprints. As a result, social components, public space creations and residents’ participation are less emphasized in the new MIBs. In the final analysis, the success of the social-urbanism approach at Juan Bobo largely depended on Montoya’s expertise and pragmatic dedications will be the keys to insure replicability of the original MIB without diluting its social urbanism components such as paper-work assistances for subsidy application, beneficiaries’ participation and organization, public space creation, capacity building workshops, and resettlement supports.

2.5. Roles of External Actors

As mentioned in the introductory section and reconfirmed in this paper, no international donors were directly involved in the Juan Bobo project. However, donors’ assistances to similar projects implemented before the MIB functioned as catalysts for the project. For instance, the IHS helped a university program called CEHAP-PEVAL in which Arq. Montoya (the MIB team supervisor) obtained basic ideas on inclusive urban planning. At PEVAL-CEHAP, he had opportunities to participate in urban redevelopment projects such as Moravia and PRIMED, sponsored by KfW and UNDP. He further developed his networks and got knowledge through an international workshop in Quito sponsored by KfW. KfW further prepared written documents on the workshop which later served to inspire Colombian specialist on inclusive urban planning. JICA in its part offered a series of training courses on inclusive urban planning and territory ordering. All these assistances, with or without intentions, inspired and nurtured the basic ideas of MIB.

As mentioned in the previous Subsection, efficient replication of the Juan Bobo MIB needs institutional and planning coordination as well as harmonization between process-oriented and plan-oriented approaches. Here, external actors may be able to serve again as catalysts of scaling up by organizing seminars or training courses and by financing new projects.

3. Concluding Remarks: Implications for further research and discussion on CD

The five CD factors (stakeholder ownership, mutual learning, specific drivers, scaling up, and roles of external actors) presented by Hosono et al. (2010) can indeed be identified in the MID case. Stakeholder ownership was strongly observed especially in Phase 1. In various phases, mutual learning occurred between the residents and the MIB team members and among MIB team members themselves, and among various organizations being involved in the project, resulting in project implementation with strong social components. Several specific drivers (driving forces) were also identified while external actors indirectly supported the MIB elaboration process. As a result, the MIB at Juan Bobo became one of the most successful urban redevelopment projects based on social urbanism in the world. The project has also been scaled up to a certain extent although many challenges remain for the expansion of the inclusive approach.

From the analysis above, we can draw three main lessons on CD. First, we need to change our time frame by which we look at the CD process. The MIB experience shows that the process can be by far longer than what has been assumed to be by donors and researchers. Twenty-five years passed between Phase 1 in which institutional preparation was made and public awareness was enhanced and Phase 3 in which actual project planning started. In addition to these preparatory years, five more years were necessary to implement construction works and make residents resettled. Although it is not necessary for donors/external actors to accompany the recipient country in the whole process, such historical timeframe and depth of historical context should be taken into account when they design development cooperation projects/programs with CD components.

Second, related to the first point, the current periodization of development assistance into three phases -- before (where awareness is raised and shared), during (project period), and after (where scaling up hopefully occurs) – and the overwhelming focus on the project period should be reconsidered. In the MIB, the project implementation (construction and resettlement) phase took only five years among the total process of 30 years. An especially greater attention needs to be directed to the pre-project phases of
awareness building and project conception as the direction and deepness of endogenous CD is largely formed during these phases. By focusing on the pre-project phases, we will be able to look into the factors which have been scarcely treated in the CD literature. For instance, the initial conception was greatly precipitated by the course of events in which institutional reforms and the rising of awareness on urban poverty synchronically happened.

Third, the importance of the pre-project phases was also shown by the documentation of previous projects and seminars which would later come to greatly help specialists conceive new ideas. In the MIB case, donors’ role was crucial in this respect. By bringing external ideas and experiences, external actors can play important and sometimes unintended roles of helping incubate innovative ideas partially based on external ideas but adjusted to the local conditions.

Fourth, the post-project phase also merits a greater attention. Major constraints are observed in the issue of sustainability and replicability. The experiences at Juan Bobo demonstrated that the project did not end at the completion of construction works. To connect the new housing opportunities with the improvement of individual and community life, the real aim of the project, the beneficiary population needed to be “empowered” to deal with the remaining problems. On the other hand, to enhance the chance of replicability, close coordination among relevant institutions and policies as well as among distinct development approaches is crucial. Here again, external actors may be able to contribute by serving as coordinators and by providing information on new ideational trends of the world.

This paper focused on a single CD case and extracted several lessons on future research and practice of CD as well as the role of external actors. Tracing the whole process of conception, planning, implementation, and scaling up, it clarified that CD is a long-term endogenous process that proceeds through interactions among local stakeholders. External actors played an indirect but important role as catalyst of the change. However, since the CD process is still little known, similar in-depth studies need to be accumulated on many other cases. In such studies, not only the project phase but also pre-project and post-project phases should be closely examined. Furthermore, the cases with various degrees of donor participation should be compared to look into the role of external actors. Such research will be a time-consuming attempt but it will reward everybody involved in the development assistance by helping enhance our understanding of CD in practice.

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**Interviews**
- Interviews with Alejandro Echeverri: 24th of June 2011
- Interview with Javier Jarallimo: 25th of June 2011
- Interview with Mr. Jonás Mena: 25th of June 2011
- Interviews with Carlos Montoya: 24th of June 2011, 10th of February 2012
- Interviews with Juliana Portillo: 24th of June 2011, 10th of February 2012
- Interview with Mr. Elkin Zapata: 14th of February 2011
- Focus Group Discussions with the residents: 24th of June, 2011, 10th of February 2012

**Appendix I  MIB fact sheet**

<table>
<thead>
<tr>
<th>Implementation area and its population</th>
<th>The area (micro-territory) along the banks of Juan Bobo stream, which is between the Andalucia and Villa Niza section in the Comuna 2 (1.75 ha, 1,353 people (300 families))</th>
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</thead>
<tbody>
<tr>
<td>General Coordinator</td>
<td>EDU (Empresa Dessaroolo Urbano)</td>
</tr>
</tbody>
</table>
| Goals                                  | ● Application of efficient and flexible planning with appropriate technology for each micro-territory  
● Promoting community participation for co-living and better security  
● Improvement of environment, hygiene, and zoning for resettlement  
● Housing resettlement, improvement and legalization  
● Total improvement of the project area and surrounding communities |
| Components                              | ● Physical  
● Social  
● Inter-institutional |
| Budget                                  | Approx. US $ 4 million |
| Construction of Infrastructure (selected) | ● Sewage pipes (2.7km)  
● Cleaning of the stream basin (200m)  
● Stream edge improvement for pedestrians (1,500 m²)  
● Public space and pedestrian mobility improvement and construction (4,500 m²)  
● Environmental recuperation (2,000 m²)  
● Construction of a bridge to connect the community  
● Construction of a library and two community salons |
| Construction of new houses              | ● 8 apartments constructed for 118 families  
● registration of property rights for the 118 families |
| Improvement of houses and living conditions | ● 115 houses improved  
● Organizing housing committees  
● Capacity building in self-construction  
● Community gatherings  
● NGOs as facilitators |
| Major project outputs (based on assessment conducted by EDU) | ● Physical sustainability: New constructions with appropriate work procedures matched to the legal standards  
● Social sustainability: Making agreements among residents, Manual of co-living, Feeling of citizenship enhanced, Inter-institutional programs implemented  
● Economic sustainability: Job training, Community work, Agro-industrial program, Basic education  
● Environmental sustainability: disaster management, Effective usage of public services, Environmental education, ecological balconies installed |

Elaborated by the author based on Alcaldia de Medellin 2011, Rivas 2011 and Blanco 2009
Appendix II: Abbreviation lists for the Case Study

- CEHAP-PEVAL: Centro de Estudios sobre Hábitat Popular - Programa de Estudios de Vivienda en América Latina (Centre of Popular Housing Study - Program of Housing Studies in Latin America)
- CODEVI: Corporación de Desarrollo, Educación y Vivienda (Cooperation of Development, Education and Housing)
- EDU: Empresa de Dessarrollo Urbano (Urban Development Enterprise)
- EPM: Empresas Publicas de Medellin (Medellin Public Enterprises)
- FOVIMED: El Fondo de Vivienda de Interés Social del Municipio de Medellin (Focusing Fund of Social Interest of the Municipality of Medellin)
- IHS: Institute for Housing and Urban Development Studies
- ISVIMED: Instituto de Vivienda y Hábitat (Institute of Housing and Habitat)
- LAUR: Laboratorio de Arquitectura y Urbanismo (Architecture and Urbanism Laboratory)
- MAVDE: Ministerio de Ambiente, Vivienda y Desarrollo Territorial (Ministry of Housing, Development and Territory Development)
- MIB: Mejoramiento Integral de los Barrios (Integral Slum Improvement Project)
- FONVIVIENDA: Fondo Nacional de Vivienda (National Fund for Housing)
- PMIB: Programa de Mejoramiento Integral de los Barrios (Integral Slum Improvement Program)
- POMCA: Plan de Manejo y Ordenamiento de una Cuenca (Integral Micro catchment area Plan)
- POT: Plan Ordenamiento Territorial (Territory Ordering Plan)
- PP: Plan Partial (Partial Plan)
- PRIMED: Programa de Mejoramiento Integral de Barrios Subnormales (Program of Integral Improvement of Subnormal Areas)
- UPB: Universidad de Pontificia Bolivariana (University of Pontificia Bolivariana)
- VIVA: Empresa de Vivienda de Antioquia (Housing Enterprise of Antioquia)