

# Housing for Low-income Families in Ecuador

## Organized Self-helping Construction, a Possible Solution?

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The migration to the main cities is a problem that affects most of the principal cities in the world, and the city of Guayaquil is not an exception, there are some actions taken by the local government covering some of the basic infrastructure needs, but the increment of the population and the migrations to Guayaquil, from some of the rural areas and other less developed provinces, makes impossible for the local government to attend to the entire demands, but the housing shortage is the main issue to be addressed by the local governments who see the necessity of the inhabitants unattended. Nevertheless, this response sometimes leaves the lowest income families out of the picture.

This is why we need to involve all of the entire society, to find different approaches and open the scope to address this vital issue. Therefore, the intention of this paper is to give to each part a role so that as a group they can meet the same goal, which is to promote the access to housing for the lowest income families in the city.

## Shelter Situation Analysis

### Demography and Health

Ecuador's population is 12' 156,608 and grew 3.8% more between 1950 and 2002 but by the 21st century is expected a bigger growth, considering the young majority.

(Table and Graphic No.1)

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Guayaquil is the capital of the Guayas province and the 62 % of the population of this province lives in Guayaquil. Guayaquil's population is around 2.039.789 habitants and has a 2.5% rate of growth this is the 17% of the total population in Ecuador, and there is a high number of urban population 1'985,379 (82%) and only 54,410 habitants live in rural areas this is the 18% of the total population of Guayaquil. (Infoplan 2003).

Remittances represent the second largest financial source from abroad after oil exports, and bring in 170% more money than banana exports and 474% than tourism. And a high amount of these remittances is invested in the housing sector.

The Gross National Product is 20.8 billion and the GNP per capita in Ecuador is \$1,830 USD while in Latin America and the Caribbean is \$ 3,310 USD (World Bank Group 2003) it is important to highlight that 70% of Ecuadorians are poor and from this percentage 40% live in indigence. Therefore, 80% of Ecuadorians are not able to have access to housing.

Nowadays Ecuador's housing shortage was estimated around 1,200,000 units in 2002, out of this 60% qualitative<sup>1</sup> and 40% quantitative<sup>2</sup> housing shortage. In the case of Guayaquil there are 390 habitants per Km<sup>2</sup> and the total of urban soil is 31,642 hectares, with 8,487 hectares of residential use and out of this percentage 2,751 hectares (32.41%) are formal and 5,736 hectares (67.88%) are informal. (INEC 2001)

For the housing affordability the Department of Strategic Plans and Programmes establish a model of house based on the middle price of all the houses in the city and also considering the repetition factor of the model. The price of this house (model) is \$15,802.50 and the family income is about \$2,853.17 this means that the price of the house is 5.54 times higher than the income of the family. The 67.54% of the people in Guayaquil use the public transportation and only the 12% use personal vehicle, the rest uses others kinds of transportation (taxis, minibuses, etc)

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<sup>1</sup> Qualitative shortage: Integrated by the houses with the possibility of improvements in their physics structure and in the basic infrastructure such as streets, drinking water, sanitation and electricity. For a better life quality

<sup>2</sup> Quantitive shortage: When the whole house needs to be replaced because the precarious conditions presented in the fisic structure of the house. And the total absence of basic infrastructure. (The National Council for National Development (CONADE))

## Actors in Shelter Delivery and their Roles

There are two programmes implemented at this time by the MIDUVI. The first one is the Urban and Regional marginal houses. For a new house they give \$500 USD and for a house upgrading \$250 in materials. The second one is the Bonus for New Urban Houses and has the next formula:

Savings + Bonus + Credit

If a person wants to apply, first he needs to save 10% of the total value of the house, and after this stage is completed he will be able to receive a \$1,800 USD bonus and paid the rest of the deed with the financial credit given by the bank or a Financial Institution.

Trying to do something about this problem the municipalities of Guayaquil, Cuenca and Quito are developing a number of modalities, joining ventures with the private sector, to provide public or private land plots with basic infrastructure services, so the constructions companies can start to build the houses in this site without charging the price of the plots and the infrastructure to final price of the units.

Since there is a high shortage of housing and a low density of occupation of urban land the Municipality of Guayaquil is promoting a programme named “Housing Plan of Plots with Basic Services Mucho Lote”. Its area is 1.627.700 m<sup>2</sup>. and it is conformed by 15.000 plots divided into 7 phases.

The NGOs also play an important role developing different solutions to the housing shortage like Hogar de Cristo who provides bamboo houses for very low income families, developing its own method of producing rapid and very low priced. During its thirty years of existence it has produced more than 500.000 houses, these houses are a provisional solution to the housing problem, and the expected time to last is around five years.

The faculty of Architecture of the UCSG and the IPUR are implementing researches and projects with the purpose of proportionate a response to this problem. The main objectives are:

- Improvement of housing conditions for low income populations
- Comfort and quality of life
- Search of better construction materials
- Self-help housing (research of the best practices in Latin America)

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At the moment in the institution a research in the Self-help construction matter is been maid recompilation the best practices in America Latina. At the end we should evaluate what are the aspects that could be implemented in our context. Also is deeply analyzed the technical matters of comfort of the house, the response to the climatic environment and the sustainable aspects of the different solutions in each case of study. The institute is also involved in projects like “Maria Elena” house, where experimentation with construction materials and constructive techniques where deeply analyzed from various points of view such as thermal comfort, durability, cost, among others.

## Access to Housing for the Urban Poor

The current financial system exclude the opportunity of the poorest to access to the housing programmes executed by the local governments, their incomes are below the affordability charts (monthly incomes vs. monthly payments) and this are not steady or regular.

The current housing programmes don't satisfy any real necessity of the users, their only concern is to do the most possible quantity of houses without caring about the quality of the product.

The cost of the construction materials, the technical assistant ant and the profit of the construction companies increase the final value of the houses, making even harder the access to them for the lowest income families.

Another problems is the lack of collaboration between the Government, Educational Institutions, NGO's, International Cooperation Agencies and the community in general.

## Need for a New Approach

The current financial system to access to these houses is not accessible to the poorest, this is why it is necessary to find a new approach between the current financial system and the lowest income families in order to give them access to a massive housing programme like the “Housing Plan of Plots with Basic Services Mucho Lote” implemented at the moment by the Municipality of Guayaquil.

The constructions materials and the technical supervision are expensive, if we add the price of the working hand, and the profit of the private builders, we end with an unnecessary list of expenses that could be reduced in favour of the low income families.

Most of these families work in the informal sector, and without a regular income, is hard to gain access to a mortgage loan.

Another important issue is that the government makes these projects without meeting the real needs of the community, and the Universities, NGO's, and other agencies are left out.

### The Housing Programme “Mucho Lote”

The Municipality is at the time implementing a massive housing programme. They don't design or built the houses, they only provide the plot with the entire infrastructure, and then they select the constructions companies in charge of the housing offer in Mucho Lote.

The problem is that this construction companies works directly with the banks, the ones who demands the fulfilling of certain requirements, impossible to accomplish to the poorest.

Another relevant issue is that these constructions companies do not care about giving to the poor a good product, they abuse of the big need for housing of the poor who doesn't have another alternative. So they offer the same solutions that were implementing for the past governments, wasting the opportunity to make a different prototype, a prototype that improves the quality of life of those families. This is why without adequate corrections to the current typologies they'll be repeating the same mistakes of the previous housing programmes. So before the next stage begins improvements to the present design needs to be maid.

## Organized Self-Help Construction

In the organization IPUR, which I'm part of, and between the professors of the UCSG, there is personal who participate into the training programme “Organized Self-Helping Construction” held in Costa Rica by the HDM, and is an important human resource that will be a corner stone in the develop of the action plan.

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Also I'm concluding the case of study of organized self-helping construction in Latin America and its applicability in Ecuador, this material will be a useful tool to gain knowledge about the necessary steps to implement this kind of programme.

So the main points that will be attended in the action plan are:

- Offer to the poorest an alternative to access to a massive housing programme, or improve their own existing houses using a progressive design and self-helping construction.
- Identifying the possible actors, that can be part of a self-helping construction project, and a community with potential to be part of this kind of project, and promote strategic partnerships between the actors involved in the housing sector.
- Improving the design of the houses in the bioclimatic aspect not only will have an effect in the sustainable development. It will improve the living condition of the low income families. Also with a better prototype using suitable materials, the price of the houses will be diminishing.

Before the second stage of the massive housing programme on Mucho Lote begins it is necessary to propose improvements in the design of the current houses that are being developed.

And after the measurement of the climatic behaviour on the houses built in Mucho Lote it could be possible to detect the possible problems and develop a new prototype, or improve the existing one. (Long period)

## Action Plan

The first step will be to analyse the results of the best practice in the current case of study of organized self-helping construction in Latin America and the possible application of the process to our country.

1. Identify the possible actors, their strengths and weaknesses, so they can be part of a self-helping construction project.

- The Central Government: MIDUVI (subsidy)
- The Local Government: Municipality of Guayaquil
- The Educational Institution: Universidad Católica de Santiago de Guayaquil
- The NGO's: Huancavilca Foundation
- International Cooperation: PROMESHA

- The Community: Coop. 15 de Agosto (Guasmo Sur)

2. Assign the roles and responsibilities of the following actors in developing the project.

- The Central Government: Subsidy of the MIDUVI
- Municipality of Guayaquil: Design approval and construction permit, and donor of the land on the “Housing Plan of Plots with Basic Services Mucho Lote”.
- Universidad Católica de Santiago de Guayaquil: The participation of the students at different levels of the project, previous studies, design of a progressive house, technical supervision at the construction level.
- Huancavilca Foundation: Social management of the community
- International Cooperation: Consultancy and capacity building.
- Coop. 15 de Agosto (Guasmo Sur): beneficiaries and working hand in the self-helping process.

3. Community selection

To know the most urgent necessities of the community, and their potentiality to participate in a self-helping construction process, we apply 30 opinion polls and recollected some information by observation of the place.

The Cooperativa 15 de Agosto is formed mostly by people who have migrated from other provinces like Manabí, Esmeraldas, Los Ríos, etc. looking for better job opportunities. In the community there are some basic services like pipe water, electricity, and waste recollection, but there is no sewer system. The 56% of the houses are built with bamboo, the 30% live in concrete houses without plaster and only the 10% own houses of concrete with plaster. The 46% of the dwellers are processing their land legalization, 40% live in legalized land, and 14% live in informal possession. The plot size is between 90 and 140 m<sup>2</sup> and the construction area is between 16-40 m<sup>2</sup>. The majority of the houses are one storey and the 65% doesn't have any interior division, is only one space where the kitchen, dining room, and bedrooms share the entire space. The families have a monthly income between \$140-\$300 US dollars compared to the basic food basket of the \$446, and to the vital basket or poverty basket of \$302, represents a really big problem to these families to have possibilities to improve their quality of life. The main activity between the people who answer the poll is either working hand in construction or

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domestic activities, so this is a strength that could be very useful at the moment of a self-helping construction process. Another aspect that needs to be highlight is that there's a committee who is in charge of conduct improvements to the community, with collaboration of public and private institutions, and promoting social, sporting and educational activities. The main purpose is to allow the people who leave in the community to obtain a house with the proper infrastructure, built with durable materials and located near the community services which are consider in the Mucho Lote programme. But at the same time is necessary to work in different areas to implement a project of organized self-helping construction. Using the results of the opinion polls done to the beneficiaries we knew some useful facts that'll be an important tool to assign responsibilities. Analysing the family composition, economics activities, monthly incomes, we can define which families are in the capability to access to a mortgage loan, or can use the bonus to buy building materials.

## Actors Scheme

INTERNATIONAL COOPERATION	UNIVERSITY		PRIVATE SECTOR	NGO	BENEFICIARIES
CONSULTANCY AND TRAINING	TECHNICAL			SOCIAL	
To the University	PREVIOUS STUDIES	Gather general information	Builders	Identification of the community	Working hand
		Community background	Construction Companies		
Professionals	TRAINING COURSES	Social Projects Development	Contractors	Management of the community	Participants in the design process
People involve in the housing activities			Building Materials Stores		
	DESIGN	Progressive house design		Credits administrator	
	CONSTRUCTION	Technical supervision			
	LEGAL ADVISE	Contracts			
			Land Tenure		

Figure1: General Overview



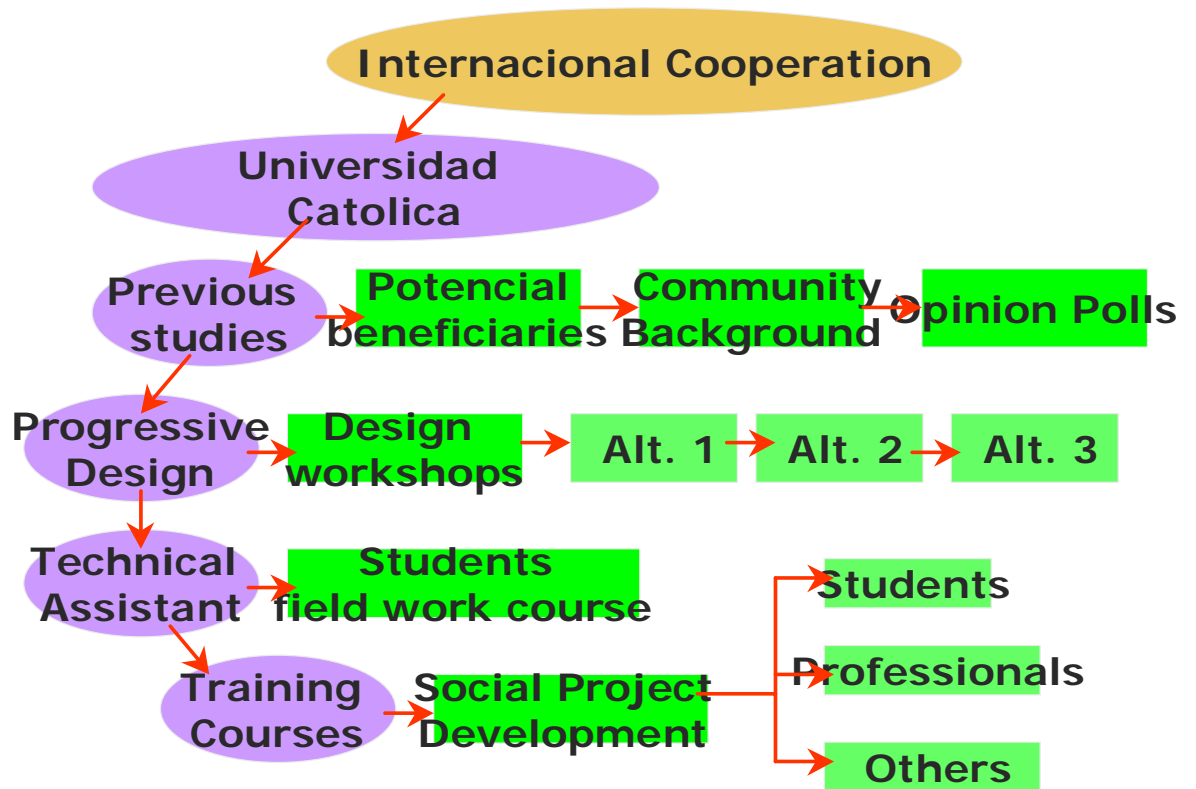


Figure2: Role of the University

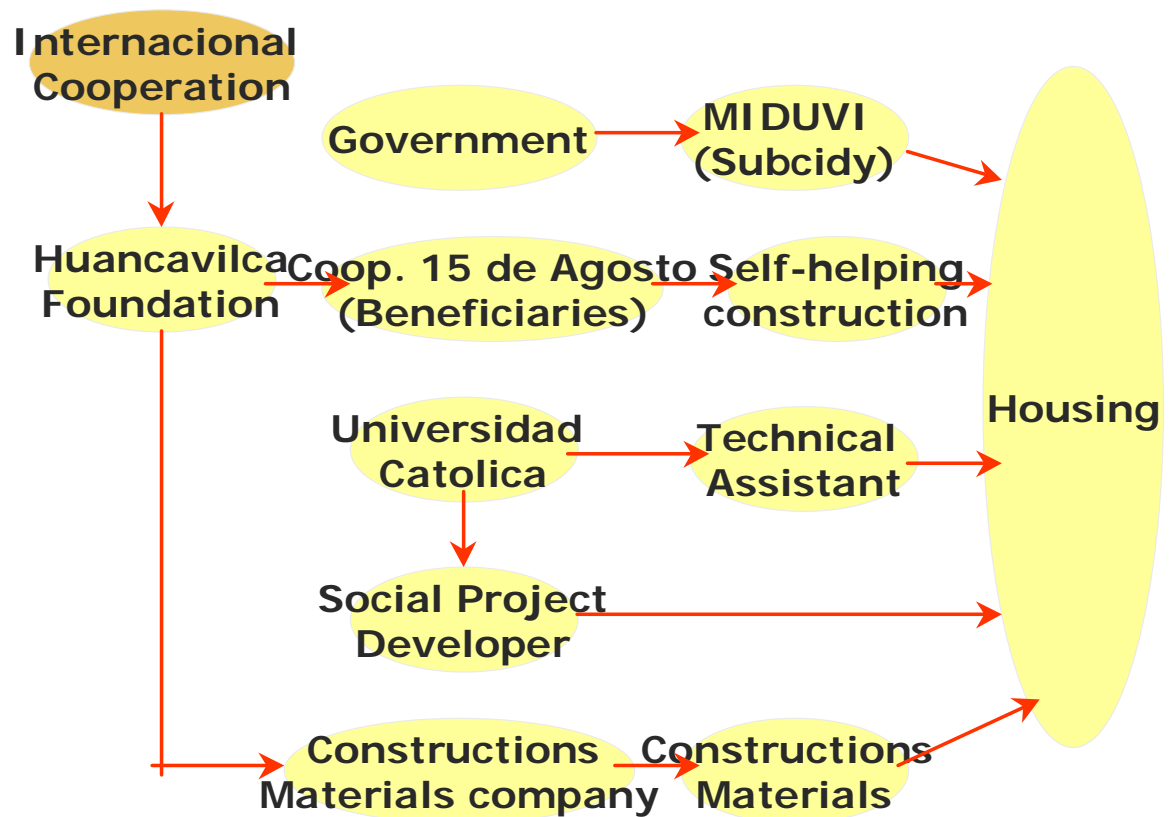


Figure3: Collaboration to reach the goal of improved housing

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With the contribution of the international cooperation, like the PROMESHA programme where the counterpart IPUR, who is part of the Architecture Faculty of the UCSG, receives continues training, participating on the post-graduated courses, national workshops and regional courses, we are able to capacitate not only our human resources, we will capacitate all kind of professionals and the community in general. So those participants like students, professors, professional, private builders and the community, who have been trained in these programmes, held by the UCSG, will be able to improve their capacity to work with the communities enable them to work in a self-helping programme. In these training courses it will be special topics for the social project developer enable them to deal with a family and the whole community, guiding them through the entire process.

Then after when we have trained human resources will be able to implement several working fields, with the collaboration of the students and their professors. First they will start with the previous studies, gathering all the relevant information to begin the project and then develop the designs of the progressive houses, in the workshops at the Architecture Faculty, including the budget, chronogram and formats to control expenses and materials. And finally delivering technical assistant to the families involve in the self-helping construction process.

The NGOs will receive also capacity building at the courses held in the University and some specific consultancy from the international cooperation about how to work with the community. So when they receive the design plans and the budget, they can start to work with the community.

Therefore to accomplish these scheme of is necessary an active participation not only of the educational institution, government, NGOs, and private constructors, we need to work with the community, capacitate them to work as a group, one community for one purpose, but the result can be improve if we have participation of the construction materials companies, because if they become part of these process, they could diminish their prices and in return all the materials used in the programmes will be bought to them.

With all these pieces working together to accomplish the same goal, we might be able to give access to housing to the lowest incomes families. From an educational institution, which I'm part of is very doable, but we need to make the whole society

aware of the current housing situation, were a massive housing programme as Mucho Lote is not attending to a considerable part of the inhabitants in the city.

## Acronyms

HDM: Housing Development and Management

IPUR: Institute of Urban and Regional Planning

INEC: National Institute of Statistic and Census

INFOPLAN: Digital Information of Statistic and Census

MIDUVI: Ministry of Urban Development and Housing

PROMESHA: Programa para el Mejoramiento Socio Habitacional

UCSG: Catholic University of Santiago of Guayaquil

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