

Medium Rise Housing

An answer to lack of urbanized land in Metropolitan Area of San Salvador

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Introduction

El Salvador is one of the more densely populated countries in America (6 276 037 people live in a territory of a little more than 20 749 square kilometres, which makes a density of 303 inhabitants per square kilometre).¹ Therefore, struggling for a piece of land to build a shelter can become a hard task to accomplish.

In January the 13th, February the 13th and February the 17th, year 2001, three major earthquakes shock most of the country (with magnitudes of 7.6, 6.6 and 5.9 in Richter's scale).² Those events and the following "replies", tore down or damage an estimated of 314 925 precariously built houses,³ mainly in the countryside. Most of the houses destroyed, already were part of the 513 819 houses estimated qualitative default. In that way the initial 40 505 houses estimated quantitative deficit was increased by some 141 062 completely destroyed by earthquakes, making necessary to build 355 430 housing units in the next three years, including 173 863 that resulted with some sort of damage.⁴

The second earthquake hit mainly the rural areas of the central region of the country, making many people to abandon those areas, and as many have relatives in greater San Salvador, some are migrating into the capital city. Besides, the landslide that the first earthquake provoked in Santa Tecla (An adjacent city to San Salvador), aside of killing more than 400 people, has made the survivals to move to other housing neighbourhoods within the Metropolitan Area of San Salvador.⁵

The "enlarged" Metropolitan Area of San Salvador (AMSSA), has in its territory (5% of the country's), almost the third part of the population (almost 2 million) of the country, (a little more than 1000 square kilometres, including Ilopango Lake, San Salvador's Volcano, "Cordillera del Balsamo" and San Jacinto Mountains which take more than 50%). This makes an average density of 4 000 inhabitants per square kilometre.

There is not enough urbanisable land in the capital city. This places an enormous demand over governmental and private institutions, for providing adequate solutions for giving shelter and better environment to the people.

During the last ten years, the average rate of housing construction has been 20 000 solutions per year.⁶ Therefore, if the task is to be accomplished, new planning methodologies, programming innovation, building technology, and design approaches should be looked for and be applied to increase the current production.

1 See maps 1, 2 and 3 on page 3.

2 Centro de Investigaciones Geotecnicas, CIGT (Salvadorean Geotechnical Centre), January and February 2001.

3 Data gathered by the National Emergency Committee.COEN, (Salvadorean governmental agency which coordinates actions in case of disasters).

4 Sectorial Strategic Planning Agency, Ministry of Public Works, Transportation, Housing and Urban Development. Housing Component, National Reconstruction Program. March 2001.

5 See maps 4 and 5 on pages 4 and 5.

6 CASALCO (Salvadorean Construction Chamber).

This has to be done through an integrated effort, with the participation of several actors: the International community (governments and multi sectorial agencies such as IDB and the World Bank, European Union aid, Madrid Consultative Group⁷, etc), Government at central and local level (ministries, municipalities, other governmental agencies), private sector (developers, contractors and designers), and most important the Community itself (NGOs and “juntas de vecinos”).

Program 4.7: “**Vivienda en Altura**” (High Raise Housing) is part of “Salvadorian Housing Policy”, which states as a main objective: “To rationalize natural resources by concentrating people in already urbanized areas, taking advantage of existing water supply, sewerage, rainwater drainage, energy, transportation and roads and streets networks.”⁸ This will lead to densify cities of first and second order in the country.

Currently, the ministry's staffs are working in an experimental urban renewal project, which deals with “recycling” former institutional and some private sites and buildings. This project will enhance and old and important area of the city by making it an integrated renewed high, medium and low raise housing area, which will provide amenities and facilities also for the surrounding neighbourhoods. **This paper intends to establish some general guidelines for undertaking later deeper studies and plans for the project.**

This project needs to be put into context. Qualification and quantification of components have to be done in the process of dimensioning the amount of intervention each related institution has to do for the outcome to be worthwhile

The starting point will be to ensure the availability of the land and the will of owners to participate in the project.

Second step will be stating the size of the population, which is to be the beneficiary of the project and classifying by income, size of family, age, sex, etc.

Follows the making of a general master plan, which has to be related to existing Urban Metropolitan Development Plan (PLAMADUR-AMSSA).⁹

The plan has to develop an adequate integration with existing networks (water supply, drainage, energy, circulation systems, etc.).

The making of a more detailed site and building design would be the next stage, to end with budgeting and timetabling and making the legal framework suitable to implement the project.

Methodology

As for this paper, regarding the limited amount of time and resources at reach; the outcome will have to be just a rough outline of reference for a Master Plan for the site. **In order to accomplish the task of establishing a framework for the study, a simplified methodology has been followed:**

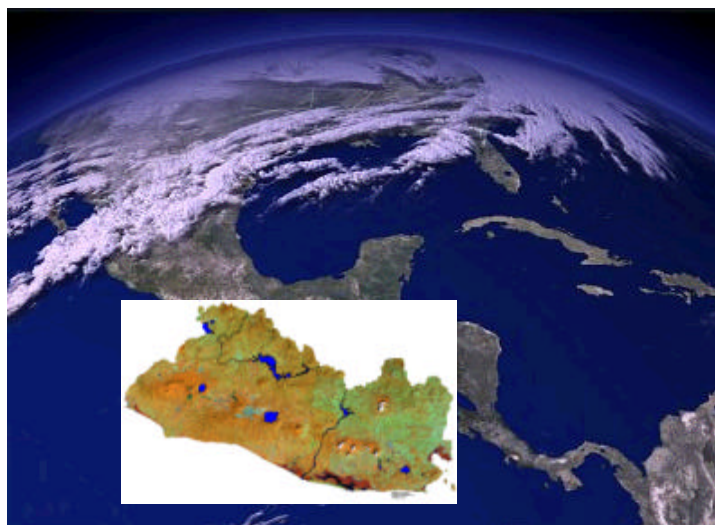
1. Gather information in El Salvador about the country, the Metropolitan Area of San Salvador, AMSS, the National Housing Policy and the site
2. Study and analyse the information in order to accommodate the relevant data to the course's objectives.
3. Summarize the relevant data in order to give a non-Salvadoran reader, enough information to understand the actual situation.
4. Establish some guidelines for the designing of a Master Plan for the site.
5. Draw some general conclusions out of the results of the paper and the relation with the course's contents and objectives. And
6. Suggest some practical recommendations to make the project suitable

⁷ Reconstruction and Recuperation Program after Earthquakes.

⁸ Ministry of Public Works and Urban Development

⁹ Plan Maestro de Desarrollo Urbano del Area Metropolitana de San Salvador Ampliada. Master Urban Development Plan for the Enlarged Metropolitan Area of San Salvador. ITS. SPEA. CT (Const.) San Salvador, 1997.

Background



Maps 1, 2 and 3. El Salvador is in the middle of Central America, which is also in the middle of the Americas. Map 3 shows the proposed conceptual regional organization, made by the National Development Commission, appointed by the President of the Republic.

The “**Política Salvadoreña de Vivienda**”(Salvadorian Housing Policy)’s main objective is to establish a new Housing System in which; through the participation of organized citizens everybody could have access to housing. Special support would be given to lower income families by special programs supported by governmental subsidy.¹⁰

In order to reduce quantitative housing default and maintain social equity and adequate use of land the central government has established some specific programs being those programs in the process of accomplishment. They are:

“4.1 – Savings, Subsidy, and Financing for the Housing Program”

“4.2 – Land Legalizing Program”

“4.3 – Urban Solidarity (or Neighbourhood Betterment Program)”

“4.4 – Human Settlements Program”

“4.5 – Housing Beyond the Borders Program”

“4.6 – Leasing Program”

“**4.7 – High Rise Housing Program**”

“4.8 – Land Developers Certificating Program”

“4.9 – Environmental Risks Management program”

¹⁰ Some special programs are being developed with loans of the International Development Bank, like the so-called “Subsidy Program”.

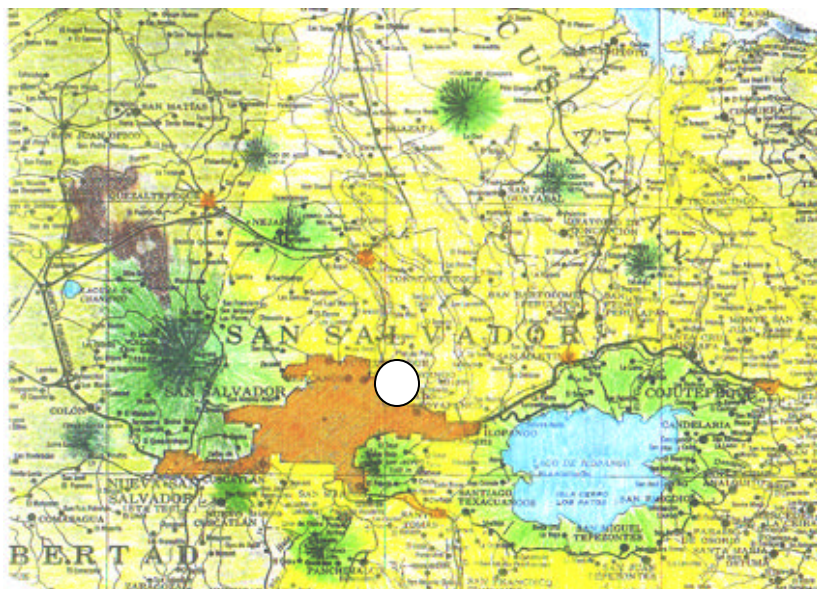
Table 1 Housing Situation during the last six years in El Salvador.¹¹

TYPE OF HOUSING	2001 (JAN-F)	1999	1998	1997	1996	1995	1994
WITH 1 DEFAULT		208478	209754	229165	218621	208065	192441
WITH 2 DEFAULTS		141351	142216	153806	152725	156902	145504
WITH 3 DEFAULTS		105659	106306	101745	114420	114534	119376
WITH 4 DEFAULTS		49978	49377	44303	56961	55447	80361
WITH 5 DEFAULTS		6941	6984	5492	6997	8225	12170
WITH 6 DEFAULTS		2312	2433	1146	1489	3749	3940
TOTAL DEFAULTS		516718	519068	537654	553209	548917	555786
DEFICIT (Lack of)	40505	40505	42634	19570	26165	32149	36500
TOTAL D+D		520723	561702	557224	579374	581066	592286
Destroyed by earthquake	314925						
TOTAL DEFI+DEST.	355430						

Defaults mean lack of one of the following essential public services, like: clean drinking water, sewerage, public rainwater drainage, electricity supply, adequate accessibility and adequate shelter. Deficit is considered when a family is sharing a dwelling with another one.

The “AMSSA” and the “PLAMADUR”¹²

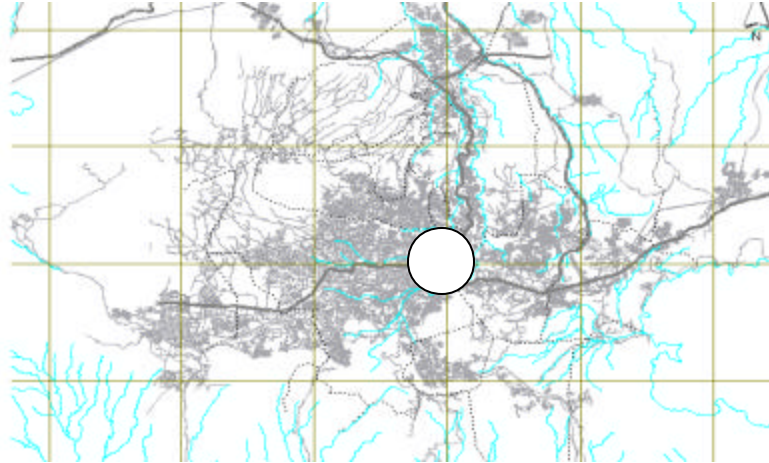
The Metropolitan Area of San Salvador Enlarged, is composed by 17 municipalities in greater San Salvador: “San Salvador, Santa Tecla, Antiguo Cuscatlan, Ayutuxtepeque, Mejicanos, Delgado, Cuscatancingo, Soyapango, Ilopango, San Marcos, Apopa, Nejapa, San Martin, Tonacatepeque, Santo Tomas, Panchimalco, Santiago Texacuangos.” The first 13 of these municipalities are associated in an institution called: the “COAMSS” (Mayors’ Council of the Metropolitan area of San Salvador).



Map 4 Ilopango Lake, The San Salvador Volcano and the lava that came out from it. Several hills and mountains surround the “AMSS” cities. Also can be noticed the main roads network. The site for the project is located at the upper right of more densely urbanized area, which is darker. The AMSSA is the abbreviation used for the Metropolitan Area of San Salvador, and the “PLAMADUR” is the abbreviation employed for the master urban development plans, made by several consultant firms during the decade of the nineties. The location chosen for the site for urban renewal is shown by the white circle.

¹¹ Política Salvadoreña de Vivienda”, (Salvadorian Housing Policy). Op. Cit.

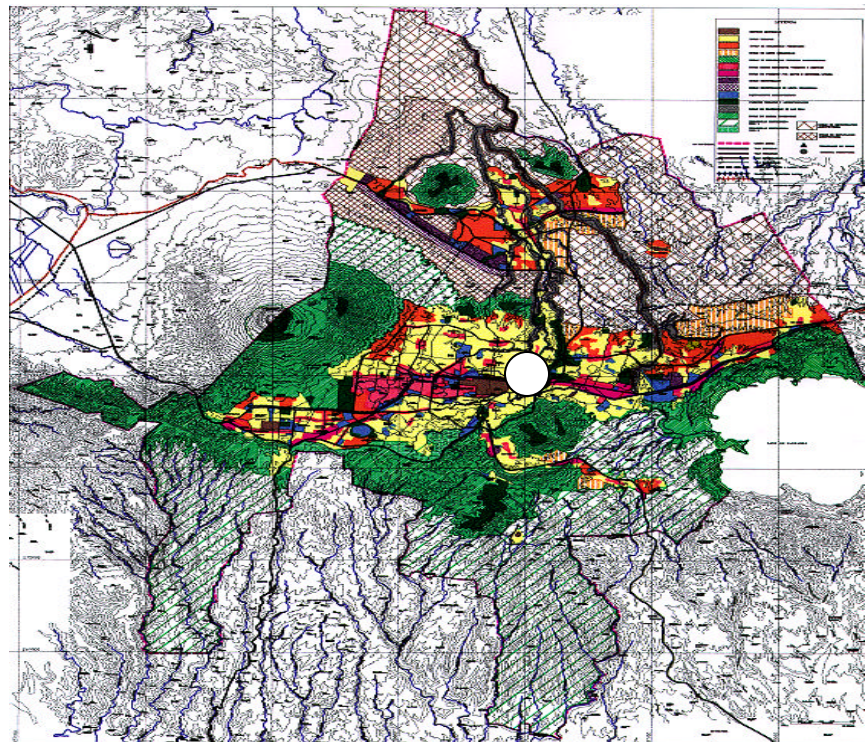
¹² AMSSA and PLAMADUR are abbreviations in Spanish as were explained in previous quotations

AMSS: Roads, Railways, Waterways and Urbanized Areas Networks.

Map 5. Metropolitan Area of San Salvador. Limits and main transportation Networks. Site locations shown by the white circle where the main transportation ways merge.

For this region was elaborated the so called “PLAMADUR—AMSSA”¹³ (Master Plan of Urban and Regional Development for the Enlarged Metropolitan area of San Salvador) the plan is composed by 9 sectorial plans and special programs

The area of study for the experimental project has to be developed within the framework of this instrument. The next figure shows an abstract of the plan.



Map 6. Shows the limits of the enlarged Metropolitan area of San Salvador. The green areas are for conservation, mainly mountains. Red are commercial zones. Flamingo and violet are industrial zones. Blue areas are for institutional purposes, and yellow and orange are for housing purposes. Black lines are roads and highways. Red lines are railways. Site location is shown by white circle.

¹³ PLAMADUR-AMSSA. ITS. SPEA. CT. San Salvador, 1997. Op.Cit

The Pilot Project

The site that was chosen to build the pilot project is one of the oldest neighbourhoods of the city of San Salvador. Two of the main roads are located at the limits of the project: the "Boulevard del Ejercito", which goes to the east of the country and to Honduras and Nicaragua and the "Avenida Federal de Alemania" linked to the "Carretera Troncal del Norte" which also goes to Honduras and Guatemala. It is a densely populated area of very low-income housing people, mixed with commercial, industrial, institutional and transportation land uses.

The inserted aerial photo shows an overall view of the zone.¹⁴



¹⁴ Photograph taken by the "Instituto Geografico Nacional-IGN" (National Geographic Institute) San Salvador. 1999.

Strategies

For making such a complex plan to succeed, it is necessary a deep involvement and have real interest from all actors. Therefore, some strategic approaches to gain the will of participants will be necessary.

Description

By now, it has started a sort of lobbying with the land's and existing building's owners.¹⁵ The following is a list of the largest properties in the site:

- **The terminal for the buses** that come and go to the northern and eastern provinces (departamentos) which is property the municipality of San Salvador. In this place it is supposed to be built a modal interchange transit system terminal.
- **The terminal for the main train lines** going to Apopa and Santa Ana in the north-west; Acajutla and Sonsonate in the west; and Usulután, San Miguel and La Unión harbour in the far east part of the country. These are property of "FENADESAL", a decentralized governmental agency.
- **Two building complexes** that belong to the ministry of public works. Here, some four-story buildings, formerly used for office space, could be reconverted for medium rise housing.
- **A site where there is a complex of water wells and pumps for water supply** for the eastern and southern part of the city. That belongs to a decentralized governmental agency named "ANDA".
- **A site where are located industrial installations** to make beer, soft drinks, ice and purified bottled drinking water. These are private owned by a company named "La Constancia".
- **A site for the central distribution market**, called "La Tiendona". As this is a place for serving all market system, owned by the municipality of San Salvador, because of the traffic problems it creates to that part of the city, they want to take it out from San Salvador.
- **Three military complexes**, which are currently being dismantled to take them away from the core of the city. All of them with nice sporting and open spaces facilities. These are property of the Defence Ministry.
- **Several sites owned by the municipality of San Salvador** where offices, the municipal police and the garbage collection agency are located.
- **Several low income housing sites** named "Las Iberias" for which the municipality of San Salvador is working to introduce services and community equipment. And, finally,
- **Several commercial, Industrial**, warehouses and medium income housing, private owned.

One of the main strategies should be to convince the landowners of the benefits of the project. As some of them have already decided to get out from the city, the availability of those sites should not have to be a problem.

Currently there are some groups of people who live in the right of way of the railroad. Some of those people will be re-located to some of the housing that is going to be provided in the site for that matter.

Some of the buildings are supposed to be "recycled", which means they are going to be reconverted by changing their use and remodelling their installations.

Water supply system, drainage, and electricity and other services are going to be adequate to the new uses.

Of course legal framework is already being studied to adequate to the circumstances. Especially the condominium law is being adapted and updated.¹⁶

The final proposal and site design is going to be done by a private consultant that is going to be hired through a public competition.

Actors

The following are the main actors that are involved in the development of the project of the urban renewal of the future Central Inter-modal Transit System Terminal.¹⁷

¹⁵ As most of the land is property of several ministries and decentralized governmental agencies, the decision of undertaking the project depends mainly on the President's will. As for the municipality's land, it could be more complicated.

¹⁶ This law is already being studied for adapting it to the new circumstances.

- **The Central Government of El Salvador** through the Technical Secretariat of the President, The ministries of Public Works, Transportation, Housing and Urban Development, Defence, and Education.
- **The decentralised agencies:** FONAVIPO (National Fund for the Popular Housing), FSV (Social Fund for the Housing), FENADESAL (National Railroads of El Salvador), FUNDASAL (Salvadorean Foundation for the Development of low Income Housing).
- **The Municipality of San Salvador**, through its agency for the “Service to the Citizens”.
- **The private sector**, through the neighbouring land’s and facilities’ owners, the CASALCO (Salvadorean Chamber of the Construction Industry), the private constructors and the owners of the means of transportation affected by the project.
- **The related NGO’s**, and the **professional associations**.
- **The Beneficiaries** of the project, either the new dwellers or the current neighbourhoods dwellers.

The following is a short explanation of the role each actor will play in the project.

Description

The Central Government

During the year 2000 several facts happened that made the central government decide to take military bases out from the urbanized areas of cities. One of these facts is that a big explosion occurred in an army base. As the base was surrounded by housing, commercial and institutional neighbourhoods, there was a lot of damage to the properties and injuries to several people. This base is located in the boundary of the site that has been chosen to develop the urban renewal project.

A few hundreds of meters away from that place, two other bases are located. All of the bases are property of the central government through the Ministry of Defence.

The Ministry of Defence currently is the institution in charge of maintaining the territory integrity (According to National Constitution), and help the population in cases of national disasters. As its purpose is not attack any country, nor keep public order, the location within the cities has proved to be not very convenient. For such matter the President, publicly announced his decision of taking all military bases out from main cities. Therefore, there will not be much problem reconverting the use of land and buildings for housing and recreation purposes. But as the Probity Law in El Salvador requires that all pieces of land pertaining to the government have to be valued at market prices prior to sell, a mechanism to make available the land to the low income people has to be developed.

Besides the Ministry of Defence, there is also The Ministry of Public Works, Transportation, Housing and Urban Development, which has two pieces of land and a complex of buildings in which the offices and shops of the institution were located. Some of those buildings are four story, and fairly new. Even some of these were damaged by the earthquakes; some others could be reconverted into medium raise housing units. In addition, there are several open spaces between them that could be used as community facilities spots.

Close by to the Ministry’s properties there ere several other institutional pieces of land, pertaining to decentralized agencies, but closely related to the central government.

The Technical Secretariat for the Presidency, which is the official agency that coordinates the ministries and decentralized agencies as well as the international aid coming from other countries.

ANDA (National Water Supply and Sewerage Agency) has a piece of land in which dwells, pumps and maintenance equipment is locate.

FENADESAL (National Railways of El Salvador), which possesses one of the largest pieces of land within the site. A former Central Railway Station was located here. In this place a modal interchange station for buses, cargo trains and mass transit transportation system is thought could be developed.

¹⁷ There are some studies made by French consultants about a mass transit system for the metropolitan area of San Salvador that consider that a place for an inter-modal exchange station.

The Municipality of San Salvador

As the local government of the capital city, it has an important part in the project. The municipality is the owner of several pieces of land and quite a few buildings along the site. Among those: the Majorist Distribution Market “La Tiendona”, which extends alongside an avenue of more than 450 metres. The site in which the Eastern Regional Busses Terminal is located, itself, belongs to the City. The municipality also possesses a site that currently is being used by the garbage-collecting department. The same, some other buildings and plots like the municipal police, official vehicles service plot, offices and a retail market, are located in municipality’s plots and buildings.

Besides, the municipality has been working in several very low -income settlements such as: “Las Iberias” and “Las Islas”. The former, located to the east of the project, and the other, located to the northern part of the project. Apparently, the functionaries that could be involved in the project, have shown being interested in the coming into reality of it. Then, it is expected that the project would have the support of the municipality.

Other Decentralized agencies and NGOS

FONAVIPO or Fondo Nacional de la Vivienda Popular (Popular Housing National Fund), which is the institution could negotiate and buy the land that will be later allocated for the new use.

FSV or Fondo Social para la Vivienda (Social fund for the Housing). This institution lends money to the families of income up to four minimum salaries.¹⁸

FUNDASAL or “Fundacion Salvadorena para el Desarrollo y Vivienda Minima” (Salvadorian Foundation for Development and Minimal Housing), Private institution dedicated for more than 30 years to develop projects for the low-income families. This institution has worked with very low -income people who can’t apply to the official institutions or banks, for loans for buying dwellings.

CASALCO or Camara Salvadorena de la industria de la Construccion. (Salvadorian Chamber of Construction Industry). This private institution is conformed by most of the private construction firms and materials vendors in the country.

BMI or Banco Multisectorial de Inversiones (Multi sectorial Bank for Investment). This is an institution, that serves as a “second level “ bank, and can manage the secondary mortgage market. And, last (but hopefully not least),

The Beneficiaries of the Project.

This segment of the population still has to be defined. There are several organizations that have some activity in the neighbouring poor housing sectors, close to the site of the project. However, still, a better organization of dwellers is yet to be built. The following pages are devoted to the designing of the size of the project, both, from the demand point of view as well as the as from the offers.

Design of Process

The first step to implement the idea will be the designing of a process and institutional structure to undertake the task. The following figure shows the intended process to be implemented in order to develop the Urban Renewal Pilot Project in the selected area.

¹⁸ The Minimum Salary equals approximately to 150 dollars per month. Organization for implementing Pilot Project.

Structure of the process to develop the urban renewal pilot project¹⁹

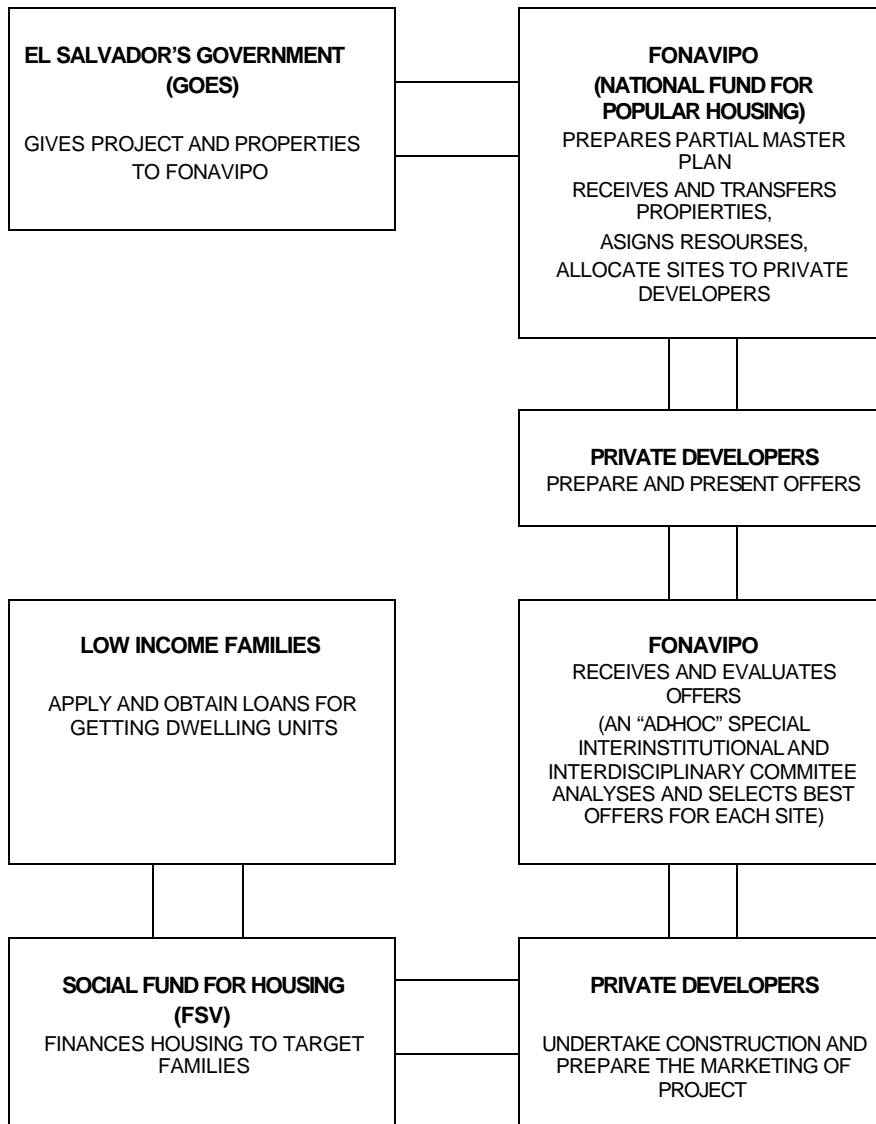


Chart 1. This flow chart indicates the main processes that will be involved in the different stages of the pilot project.

Above: The central government, through the Ministry of Public Works, Transportation, Housing and Urban Development, designs a main strategy to undertake the comprehensive development of the site. Such strategy includes the way the several ministries and other decentralized agencies are going to transfer the land to the agency appointed by the government (which probably is going to be Fonavipo). Also designs a legal framework as a base for supporting the project. Besides, the Ministry will develop a conceptual master plan for the site and for the project, which will be given to Fonavipo to further specifying. Fonavipo will prepare a more detailed master plan, by hiring a specialized firm of planners and architects, and prepare a public competition to allocate the different parts and stages of the project. At right: the interested developers and construction firms will prepare technical and economic offers to be presented to Fonavipo. Fonavipo will have, at the time, organized a special committee that will analyse the offers, and suggest (or decide) the winners of the different parts and stages of the project. Bottom: The developers will prepare the final constructions drawings and technical specifications and undertake construction of architectural and engineering field works. The Social Fund for Housing will prepare and offer to the people a special line of financing, the families (left) that will apply for and eventually obtain their dwelling units.

¹⁹ Preliminary proposal made by the Sectorial Strategic Planning Office, Ministry of Public Works, Transportation, Housing and Urban Planning. 2000

As it can be seen, the National Fund for the Popular Housing, (FONAVIPO, Fondo Nacional para la Vivienda Popular), will be the driving force for the whole project. The president of the Fund is the Vice-Ministre of Housing and Urban Development.

Design of Site

For the designing of the site it is necessary to get more information related to topography, land use, current population, activities developed by the people, use of main, secondary, tertiary and local circulation pattern for vehicles and for pedestrians. Cost of the land in the several adjoining neighbourhoods. People's preferences, for specific amenities and the related facilities is the kind of data has to be gathered through a census and questionnaires.

The Master Plan for the "AMSSA"²⁰ has some information that could be relevant to the project. Besides, it is necessary to develop a partial master plan for the site, which has to be inserted within the general master plan.

Analysing the traffic situation and the mass transit systems are crucial to solve the problems caused by the current situation of the busses terminal.

Of course, having an appropriated legal framework is indispensable. Therefore, **it will be necessary to and reform several laws concerning to property of flats and apartments in buildings of several stories high.**

The following are some considerations on such and other matters.

Description

The site could be divided in five kinds of land uses:

- 1 Institutional and Transportation terminal with amenities and commercial.
- 2 Commercial and Recreational related to Housing.
- 3 Housing of medium density in one or two story high buildings.
- 4 Housing of medium density in buildings up to five-story high with recreation.
- 5 Private owned developments of medium and high raise housing and amenities, commercial and recreational facilities.

Figure # 2 on the next page shows the land use allocation.

The following table shows the land use values and areas of the government owned buildings.²¹

Development of Central Government Owned Sites. (Initial calculations)

Data	Area of site (Hectares)	Inhabitants per project	Number of families	Number of buildings
Sites				
Ministry of Public Works (1)	2.89	1445	289	12
Ministry of Public Works (2)	0.61	305	61	3
National Army	6.30	3170	634	26
National Navy	2.35	115	235	10
Fenadesal	(Pendant)	(Pendant)	(Pendant)	(Pendant)
Total	12.15	6095	1219	51

Table 2. The foregoing data, are preliminary figures based on current land and construction prizes to December 2000.

The table just shows the central government sites and buildings valuations. The other decentralized agencies' and the Municipality of San Salvador's sites, are still to be valuated, according the particular institutional policies on such matters. In any

²⁰ The "PLAMADUR-AMSSA" or Plan Maestro de Desarrollo Urbano para el Area Metropolitana de San Salvador Ampliada (Master Urban Development Plan for the Enlarged Metropolitan Area of San Salvador), considers the development of "partial Plans" being more specifically detailed for certain areas of the city.

²¹ Preliminary study made by the Strategic Sectorial Planning Office (OPES; in Spanish), Ministry of Public Works, Transportation, Housing and Urban Development. San Salvador, El Salvador, 2000.

case, there is an official institution that is the one that may give official valuation of properties belonging to the State, which would be the base for trading such properties.

Site Analysis

The site is located to the northeast of the central core of the original city of San Salvador, close to the Downtown or Historical Centre of the city. The limits were already described in page 6. Follows a cadastral general map of the zone²² based on aerial photography, which shows the main and secondary streets and boulevards as well as the outlines of the shapes of the buildings.

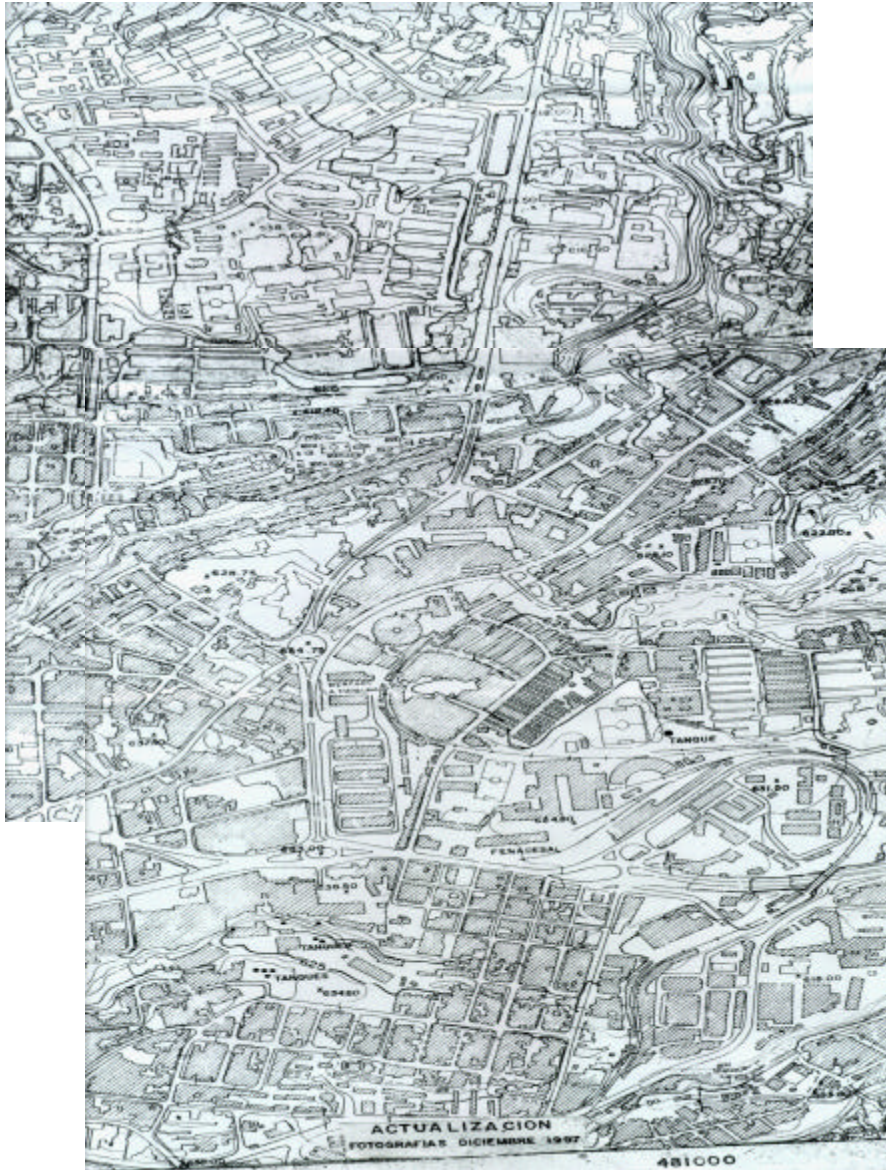


Figure # 2. Cadastral Plan that shows main circulation system for vehicles including the railways and the shapes of the built areas.

Note that most of the area is already built with a rather high rate of covered areas, mainly old commercial, industrial or housing buildings predominantly of one floor. An interesting feature is that here, except by the housing area at centre bottom, most of other areas do not follow the grid pattern of the adjoining downtown area. The loops that the railway does when approaching the central station, establishes the pattern for the shapes of adjoining roads and neighbourhoods.

²² Cadastral map, obtained from photography taken in December of 1997. Source: Municipality of San Salvador, and National Registration Centre.

Preliminary estimates related to the project implementation

The following tables were prepared to show some significant facts that help to show the initial magnitude of the project.²³

Table 3 Estimated Investment by several participants (in U.S. Dollars)

Participation in cost of housing	Value	Percentage of Total
Family Savings	800 000	3
Family Loan	15 000 000	53
GOES (Sites and buildings)	12 500 000	44
Total	28 300 000	100

It can be noted that the central government will contribute almost half of the cost of the project. This could be allowed as a subsidy to the housing of the low-income people. The contribution of the families would be made as down payments. The loans, then, would be highly reduced and will have low interest mortgage rates and long period of payment (up to 20 years)

Table 4 Project Schedule

Concept	Year	2001	2002	2003	2001–2003
Beneficiary Families		60	350	869	1279
Buildings to Construct		4	15	36	55
Percentage of Completion of project		7	27	66	100

This table shows the proposed rate of completion of project. The first year will be mainly devoted to the organization of the system to be applied, the updating of the legal framework, the coordination of the institutions involved and the acquisition of land. The main effort would be made on the third year when all the assets are expected to be set.

Table 5 Financing Accessibility for the Beneficiary Families (in U.S. Dollars)

Concept	Sites	Ministry of Public Works (1)	Ministry of Public Works (2)	National Army	National Navy
Value of Dwelling Unit		11 750.00	11 600.00	11 900.00	12 025.00
Down Payment		587.50	580.00	595.00	600.00
Monthly payment		116.00	111.00	114.00	115.00
Estimated Monthly Maintenance payment		13.50	13.50	13.50	13.50

This table shows some figures related to affordable prices the dwelling units would be available to low income families (up to four minimal salaries), the down payment they would have to enter, and the maintenance monthly costs.

Conclusions

The following are some conclusions that can be drawn out from all of the data and analysis that has been made in the preceding pages:

- 1 El Salvador has a growing and young population²⁴ and a scarce territory. This places a strong demand for land to be urbanized, to give response to the demand for spaces for living and working.
- 2 The country is located in a tropical zone that is subject to natural events such as earthquakes and hurricanes. This jeopardizes some precarious structures for

²³ Data prepared by the Sectorial Strategic Office of the Ministry of Public Works, Transportation, Housing and Urban Development. El Salvador, 2000.

²⁴ According with the Agency for the Statistics and Census of the Government of El Salvador, the media of the age of Salvadorian is 18 years old. This is due to several reasons, being principal ones: the out migration of people in working age. The toll paid to the civil war that for 12 years happened in the country, and the reduction of the rate of infant mortality due to campaigns of vaccination and the betterment of sanitary condition.

housing and other uses, which neither are designed nor built with the appropriated technology or in the appropriated places.

- 3 Even though the country faces many problems and there are very scarce resources to respond to the many urgent needs, the central and local governments are doing their best effort to accomplish with the task of giving shelter and create jobs for the Salvadorians. One way of doing so is the making of policies, and establishing plans and programs that try to deal with the problems. Examples of these, are the "Salvadorian Housing Policy" and the "Urban and Regional Territorial Plans" to order the space in the cities and the countryside in a more rational way, to get the most possible from the scarce natural resources that the country has.
- 4 Building several stories structures for housing and other activities would help to get the most of the land and take advantage of the already built infrastructure and services networks. Therefore the program 4.7 of the Housing Policy by establishing support for the building of several stories structures, is contributing to lessen the pressure over agricultural-suited land or other critical ecological zones. And
- 5 By taking advantage of the opportunity that some institutions will leave some of their land and infrastructure by getting out from the densely urbanized areas or by reducing drastically their personnel, the land available could be developed into a comprehensive urban renewal project. Starting the development of the idea has been the purpose of this essay.

Recommendations

Since the making of an Urban Renewal Plan is not an easy task if it is to be done in the proper way, the last thing to be done in this essay would be give some recommendations to the principal actors involved o related with the different components and stages of the project.

- To the Central Government: Don't let go the opportunity of taking advantage of sites owned by the government to enhance the city and give adequate shelter and create jobs for many Salvadorians.
- To the Decentralised Agencies and governmental dependencies: to look at the future and help to revitalize and enhance and old neighbourhood of the city.
- To the Municipality of San Salvador: to do its best to coordinate with the central government the making of the project.
- To the Private Sector: to make its best effort to help the government and the other actors for the good outcome of this idea.
- To the NGO's and organized population: to participate by giving ideas and support to the project.
- To SIDA, The European Union, and the International Community, especially that of Rich Countries, To continue supporting the underdeveloped countries, because their welfare is also in their behalf. A world with less trouble is a better world for all nations.

Glossary of Abbreviations

- AMSS: Area Metropolitana de San Salvador. (Metropolitan Area of San Salvador).
- AMSSA: Area Metropolitana de San Salvador Ampliada. (Enlarged Metropolitan Area of San Salvador).
- ANDA: Administracion Nacional de Acueductos y Alcantarillados. (National Administration of Water Supply and Sewerage).
- BID: Banco Interamericano de Desarrollo. (Interamerican Development Bank).
- BM: Banco Mundial. (World Bank).
- CASALCO: Camara Salvadorena de la Industria de la Construccion. (Salvadorean Chamber of Construction Industry).
- CNR: Centro Nacional de Registros. (National Register Center).
- COAMSS: Concejo de Alcaldes del Area Metropolitana de San Salvador. (Metropolitan Area of San Salvador's Mayors' Council).
- COEN: Comite de Emergencia Nacional. (National Emergency Committee).
- FENADESAL: Ferrocarriles Nacionales de El Salvador. (El Salvador's National Railways).
- FONAVIPO: Fondo Nacional de la Vivienda Popular. (National Fund for Popular Housing).
- FSV. Fondo Salvadoreno para la Vivienda. (Salvadorean Fund for Housing).
- FUNDASAL: Fundacion Salvadorena para el Desarrollo y Vivienda Minima. (Salvadorian Foundation for Development).
- GOES: Gobierno de El Salvador. (El Salvador's Government).
- IGN: Instituto Geografico Nacional. (National Geographic Institute).
- MOPTVDU. Ministerio de Obras Publicas, Transporte, Vivienda y Desarrollo (Ministry of Public Works, Transportation, Housing and Urban Development).
- OPES. Oficina de Planificacion Estrategica Sectorial. (Strategic Sectorial Planning Office).
- PLAMADUR: Plan Maestro de Desarrollo Urbano. (Master Urban Development Plan).
- PLAMADUR-AMSSA: Plan Maestro del Area Metropolitana de San Salvador Ampliada. (Master Urban Development Plan of the Enlarged Metropolitan Area of San Salvador).
- PSV. Politica Salvadorena de Vivienda. (Salvadorean Housing Policy).
- PRRDT. Programa de Reconstruccion y Recuperacion Despues del Terremoto. (Reconstruction and Recuperation Program after Earthquake).

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