5. ANALYSING THE PROJECTS

In this chapter, the Parcelling Out (P), Urbanizing (U) and Housing (E) theory is explained, in order to locate and position the projects in terms of time and evolution of a city.

Furthermore, for analysing the projects different indicators are used. These indicators are efficacy and efficiency. Additionally, the actors' involvement and the appropriate technologies are explained.

Efficacy measures mainly whether the goals have been achieved. It responds to the questions if the activities planned were finally done and if those have been successful on attending the necessities of the beneficiaries.

Efficiency measures the resources used for getting the results achieved. It measures how much money and time has been used in order to achieve the goals.

The actors' involvement is analysed, since the articulation of them and their use of appropriate technologies is crucial to reach a good end of the projects.
5.1 Parcelling Out, Urbanizing and Housing

Urbanization can be characterized through its ways of growth (Solà Morales, 1993).

The three major components in the growth of an urban area are the parcel out (P; division of the land into plots for establishing the legal property); the urbanization (U; provision and connection to shelter related infrastructures); and the housing construction (H).

Formal settlements and the usual urban growth in developed countries follow normally the order of the components as have been presented above. Firstly, the government or the property parcels the land out (P); afterwards, the plots are provided with all urban facilities at once (U; paved access road, electricity, cold and hot water, gas, phone and internet connection, and a waste disposal network); and finally, the house is built (E, from the Spanish term “edificar”).

\[ P \rightarrow U \rightarrow E \] (1)

Informal settlements, however, are normally characterized by beginning the urban growth through the housing construction (E). Afterwards, some urban services (U) may arrive to the area, such as a public fountain; and finally, the houses could even be legalized through a neighbourhood plot out (P). If this would be the case, the growth of the area could be described as:

\[ E \rightarrow U \rightarrow P \] (2)

However, the level of infrastructure services and the quality of the houses is not the same in both cases. The growth can be analysed from an iterative urbanization – house improvement point of view (Magrinyà, 2005). In the informal settlement, after a public fountain is installed and after the parcel out process, the access road could be improved, bringing to a better quality of the area and leading even the owners to improve their homes. This process would be as follows:

\[ E_1 \rightarrow U_1 \rightarrow P \rightarrow U_2 \rightarrow E_2 \] (3)

\( E_1 \) represents the first built house, \( U_1 \) the public fountain, \( P \) the parcel out and legalization of the house, \( U_2 \) the access road improvement, and finally, \( E_2 \) represents the housing renewal. Even though this is an example, it helps us to understand that this process is iterative and can follow as long as new facilities can be provided and as long as the house can be improved.

This methodology is used to analyse the urban growth and, more important, to know which could be the future urban facility to be provided and well accepted by the city or the community. As an example, in a community in which people have to walk daily for four hours to fetch water makes no sense to make a project to put water into each house; firstly, a water fountain in the middle of the community would be more efficient in terms of costs and acceptance of the project.
Projects in Ethiopia

5.1.1. Water Bank Programme

The Water Bank programme provides water in different communities of rural areas within a country wide programme.

The aim of Intermón Oxfam (IO) is to identify (with the collaboration of local NGOs) places or communities with lack of safe water supply. The projects are about locating a natural water source close to the community, canalize it to the town and distribute it through water points (public fountains).

A town without water supply is unable to develop. The cattle can not be properly fed, processing the agricultural products is nearly impossible, the construction of houses becomes an activity that has to be carried out from rainy season to rainy season and public workers, such as school teachers, do not stay in the towns for a long time due to the inconvenience of the living conditions.

This was the case of Sole Chefa, a community 200 km south from Addis Ababa, where the Sole Chefa Water Supply Project was implemented by the local NGO EOC-DICAC with the technical advice and financial support of IO.

Therefore, this water supply project becomes the first upgrading step of the town and is a required infrastructure for the town to become a city in a future.

Before the project was done, the town was in a stage of:

\[ E_1 \rightarrow P \rightarrow U_1, \quad (4) \]

where \( U_1 \) represents the existing access roads (inaccessible for cars in rainy season) and the current water “service” at four hours walking-time. This actuation has been an important infrastructure that is already involving the activation of the construction, the local economy and the demand of the community to an improvement of the communication roads that connect the town to the zone capital, what would improve the access of the local market.

\[ E_1 \rightarrow P \rightarrow U_1 \rightarrow U_2 \rightarrow E_2 \rightarrow U_3, \quad (5) \]

where \( U_2 \) represents the new water infrastructure that will develop in the future to the improvement of the housing conditions (\( E_2 \)) and to the demand of a new access road (\( U_3 \)).

After the projects have been carried out, it is sad to leave a community which has been empowered and is asking for new infrastructures. However, the Water Bank programme has the will of providing this basic infrastructure to as many communities as possible and letting further upgrading activities to other organizations or institutions.

5.1.2. Wukro Water Supply Project

Wukro is already a city that has a main paved road and proper sand roads in for accessing to the houses. The city grows as it is stated in the Wukro Master Plan and no informal settlements are to be seen. Wukro has already a proper electric network and a basic lineal water supply network, which provides water through public fountains, in most of the cases, and through private connections to 4,000 people (see Interview Appendix A: Mileaw G. Medhn, Wukro Water Office
Operator) what means a percentage of 13% of the houses. Before the project was
done this was the situation:

\[ P \rightarrow U_1 \rightarrow E_1 \rightarrow U_2 \rightarrow U_3, \quad (6) \]

where P represents the parcel out made by the local authority through the Master
Plan, \( U_1 \) represents the access roads and the nearest public fountain and \( E_1 \) the
houses built, which have normally good quality and are made of stone since in the
north of Ethiopia is an abundant material and there is lack of wood and sand. \( U_2 \)
represents in this case the arrival of electricity, which is normally the first basic
infrastructure to arrive. Finally, \( U_3 \) represents a possible water infrastructure
connection, which is only possible if a water pipe is close to the house and if the
householder has money enough for paying it.

The Wukro Water Supply Project of “Ingeniería para la cooperación” aimed to
provide water to a school and designed, therefore, an extensive reticular network
form the reservoirs to the school area, for giving the possibility of a private water
connection to each house.

A part of the discussion of the water source, the municipality was in disagree with
this extensive network. No reticular network has already been done in the city and
providing with a reticular network an area that had no even a lineal pipe was
clearly a too big step. Furthermore, the beneficiaries of the project were not even
the rich people of the city, what made difficult to explain why a poor area had a
reticular network before the middle-high class area was provided with it.

Therefore, some discussions have undergone and as a result, instead of making a
reticular network, only a lineal one has been done. “Ingeniería para la
Cooperación” had gone to far in its urban infrastructure provision and his product
had not liked the local government.

5.1.3. Twelve and Fifty Houses Projects

In Alamata, the situation is similar to the one in Wukro. There is as well a main
paved road, and the electricity and water supply infrastructure have an evolution
similar to the one in Wukro: electricity is able for most of the population and water
is mainly provided through public fountains.

The growth of the town responds as well to the Alamata Master Plan. Stone
houses are however, for high class people, since this material is much more
expensive in Alamata than in Wukro. The hoses are therefore, mostly of wood,
mud and grass.

The projects of the Missionaries of Charity respond more to the needs of a
population sector (the poorest of Alamata) than to the ones of the city or the urban
area in general. It is Important to differentiate it from the Wukro water supply
infrastructure, which was aimed to provide water to a school and to a whole area
of the city.

However, it can be particularized a sector growth to each case:

The Twelve Houses project was done in an inner area of the town. Parcel out was
already done by the municipality within the Master Plan. The houses were done by
the private company and the basic infrastructures were easily provided, since they
already cover the centre of the city. Therefore, the householders came into the
houses with all the services installed:
In this case, U and E are put together since infrastructure and houses were built together. U represents in this case access road, electricity and private water connection.

In the Fifty Houses project, the urban shelter related infrastructure are having some more problems. Parcel out was done as well, since it was one of the places the city had to grow to. However, because of being a little higher the water coverage does not arrive because of pressure therefore, the water supply is done through a public fountain 100 metres away. Furthermore, the Missionary Sisters were waiting a German organization to put solar plaques to provide electricity in a more sustainable and cheaper way, but since it is taking too long, the Sisters are going to connect the houses to the city electricity network.

\[ P \rightarrow U \rightarrow E \rightarrow U, \quad (8) \]

where P represents the plot provided by the municipality, U\(_1\) represent the access roads that were done for the construction and water provision through the fountain, E the house construction and U\(_2\) the future electric connection.

In any of both cases it is written E\(_1\) but E. The reason is because the houses were done with good quality material (better in the Twelve Houses than in the Fifty Houses) and the community was not participating in the construction process. Therefore, it becomes difficult that these houses are improved anymore. Since the houses were provided to people not used to live in such good conditions, the beneficiaries had to be capacitated to take care of their homes, to make a proper maintenance and to keep it clean.

**Projects in Addis Ababa:**

In Addis Ababa, the informal settlements began in 1975 because of proclamation nº 47 of the Marxist Junta, which nationalised all urban and rural land Figure 12 in page 19, resulting in housing shortage in the city and in the whole Ethiopia.

Since then, upgrading projects (U) of in informal settlements (the first financed by the World Bank in the early 80’s) and demolition of entire neighbourhoods have been alternatively actuations carried out by the municipality of Addis Ababa. Last big bulldozing to many informal settlements was done in May 2007. On the other hand, a big legalization had been carried out some years before to legalize old settlements identified through old plane pictures (P).

However, it is said by the municipality that informal settlements are more a result of speculation of the land than because of the need of poor householder to be located. And it is somehow true, since many informal settlements are not slum in Addis Ababa. In fact, the most slums are located in the inner parts of the city. It is expected that in the future some of these neighbourhoods will have to be relocated to build new, modern buildings and offices in the centre of Addis Ababa. In fact, this has been the case with the construction of the Sheraton Hotel in the centre of Addis Ababa.

Since the early 80s’ and until the beginning of the 21st century, many urban upgrading projects have been launched in Addis Ababa by many organisations and by the municipality. These have been carried out, among others, by the Norwegian Save the Children, CONCERN, OXFAM, CARE Ethiopia, PRO PRIDE
(financed by ActionAid Ethiopia), the local NGO IHA-UDP. However, the hugest upgrading programme has been carried out by the Environmental Development Office (EDO) between 1999 and 2004. In fact, currently, the upgrading programmes are being done through Local Development Plans (LCP) that are carried out by the municipality with the support of GTZ or other local NGO such as PRO PRIDE. (see Figure 13 in page 24). These plans are described in the Addis Ababa Master Plan and take a lot of attention to social issues and mainly to economic ones, to develop local markets. The most important one is the current LDP being carried out in Merkato area. Merkato is probably the biggest market in Ethiopia and its area suffers from many social problems GTZ and PRO PRIDE are participating in this programme as well.

About housing, now, it is the Housing Development Project Office (HDO) who launched in 2005 the huge Condominium Housing Programme with the technical advice of the GTZ IS.

5.1.4. Entoto Integrated Upgrading Development Programme (EIUDP)

The Entoto area of Addis Ababa was, in 1997, the target area of an extensive upgrading programme carried out by PRO PRIDE. This programme included physical upgrading as well as actions for improving education, health and socio-economic growth.

Since this neighbourhood was not visited before the project was carried out, a specific analyse is difficult to do in terms of the urban evolution of the area.

However, it is to expect that the area had an informal growth (E) and that some urban services came to the area slowly. Afterwards, legalization of the plots was done by the municipality, and finally a proper upgrading programme was launched by PRO PRIDE:

\[ E_1 \rightarrow U_1 \rightarrow P \rightarrow U_2 \rightarrow E_2, \] (9)

where \( E_1 \) represents the initial housing construction with very cheap materials, \( U_1 \) represents the low services that had to be at the beginning like poor quality of access road and maybe some water fountain not to far away. At some time, the municipality had to legalize the plots (P). Finally, in 1997, the EIUDP was launched and a big urban services provision was carried out (\( U_2 \)) such as access road improvement (which was the best considered actuation), water supply, latrine construction and retaining walls. Education and health assistance were as well provided. Furthermore, micro financing was one of the main activities. All together, had surely to result in an improvement of the houses (\( E_2 \)).

Since many new infrastructures were put, the community had to be empowered as well as the local kebeles. This should bring to better services in the future and to the improvement of the whole area, however, due to a not satisfactory enough phasing out, some services such as the policlinic have not gotten the adequate management and currently it is closed by government decision.

Therefore, improvements of services and of its quality have to go together with good management and training and with a good phasing out since it is a delicate moment for the continuity of the service.
5.1.5. Condominium Housing Programme

After many upgrading programmes have been carried out in Addis Ababa, housing shortage is still a big problem in the city. Informal settlements are difficult to control and, if the government is bulldozing them, at least there has to be a respond by the municipality to the housing need.

The municipality has launched, therefore, this huge Condominium Housing programme to respond to the population demands. The construction uses Low Cost Housing (LCH) construction methodologies. The goal was to provide houses with all the shelter related infrastructures (water, electricity and culvert). However, due to a bad management not always has been possible to provide them all and many houses are being given to the households without all the services.

The location is normally in the inner-city. It is looked for empty plots to relocate as few people as possible. The access roads are normally the existing ones or the ones resulting from the construction. If electricity and water is still not available at the selling of the houses, the households may get them once they are there.

\[
P \rightarrow U_1 E \rightarrow U_2, \quad (10)
\]

P is the plot provided by the municipality as it has been organized by the Master Plan. U₁ are the possible infrastructures done as the houses are built (E). Finally, it is to expect the arrival of new urban services (U₂). The houses built are buildings with blocks and it is not expected that any improvements are done, therefore E has not any sub index.

Some problems with communal services are appearing in the first years of live of these houses. The GTZ is already busy making new researches to improve the houses built, to repair them and to capacitate the householders for making a good maintenance:

\[
P \rightarrow U_1 E \rightarrow U_1 \rightarrow U_2, \quad (11)
\]

U₁ is repeated in this case for explained that some services already provided will have to be repaired or reoriented for a good use of the householders, which is being the case with some communal kitchens and wash basins.
5.2 Efficacy and Efficiency

At this comparison level the activities carried out are going to be analyzed from the point of view if these activities done were the ones initially planned and the cost of those activities.

After analysing the efficacy of each project, it is worth to note which were the resources used for achieving them and to compare which of those got better results for the financial support they have gotten for.

5.2.1. Water Bank Programme

The Water Bank programme is working well and it has been extended for a forth year for keep in work since very good results were being achieved.

Major advocacy is going to be done since the goal is that the government invests properly the big amount of money that is going to get for water projects and sanitary and hygiene programmes. As stated before, the amounts of money are $100 million from the World Bank, $100 million from African Development Bank and $60 million from UNICEF.

In the Sole Chefa Water Supply Project efficacy was very high, however small management problems came as a result of the few training provided because of lack of time. Therefore, the project was extended for 6 months and currently the community is very happy with the results achieved. A small pipe extension has already been done by the community with the help of the Woreda Water Bureau, what is a sign of the good coordination and how successful the project has been on community and local government empowerment aspects as well.

<table>
<thead>
<tr>
<th>Table 14: Basic data of the Water Bank programme. Intermón Oxfam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Bank programme (country level)</td>
</tr>
<tr>
<td>Duration of the Project/ Programme (years)</td>
</tr>
<tr>
<td>Beneficiaries</td>
</tr>
<tr>
<td>Approximate Budget (€)</td>
</tr>
<tr>
<td>€ invested per beneficiary</td>
</tr>
<tr>
<td>restored springs</td>
</tr>
<tr>
<td>Water Points</td>
</tr>
<tr>
<td>Average time for water fetching (minutes)</td>
</tr>
<tr>
<td>Reservoirs</td>
</tr>
<tr>
<td>Washing Basins</td>
</tr>
<tr>
<td>Cattle Throughs</td>
</tr>
<tr>
<td>Pipes &amp; fittings (m)</td>
</tr>
<tr>
<td>Door-to-door education on hygiene and sanitation to households</td>
</tr>
<tr>
<td>Traditional Pit Latrines (TPL)</td>
</tr>
</tbody>
</table>

As stated before, the activities of Intermón Oxfam are analysed at two levels, one is the Water Bank programme and the second one is the Sole Chefa Water Supply Project, in a rural area. The average budget of the Water Bank programme is
yearly of about € 600,000. The duration of the programme has been taken as 3 years since it was the initial plan. As said above, a programme extension has been done and currently it is the fourth year of this programme. The plan for the programme is to improve access to safe water, hygiene training and sanitation infrastructure to approximately 75,000 people in these 3 years all over Ethiopia, focusing in four main areas. This means, 24 € were invested (or at least were planned to invest) per beneficiary. In the case of the Sole Chefa Water Supply Project, with a total budget of 140,000 € and approximately 9,000 beneficiaries, the investment per person was of 15 €.

5.2.2. Wukro Water Supply Project

This project has unfortunately been the less effective of the entire visited projects. Many problems with the municipality highlighted and many changes were done to the initial construction plan of the network. The network was reduced even though the initial plan done by “Ingeniería para la Cooperación” had been previously discussed with the municipality.

Furthermore, the water resource was unclear from the beginning and many discussions resulted in important delays. Currently the project has not entirely been finished. A well has been constructed but a second one is pending of being constructed and it is still being decided were to build it.

Table 15: Basic data Wukro Water Supply Project. “Ingeniería para la Cooperación”

<table>
<thead>
<tr>
<th>Wukro Water Supply Project</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of the Project/ Programme (years)</td>
<td>3</td>
</tr>
<tr>
<td>Beneficiaries</td>
<td>30,000</td>
</tr>
<tr>
<td>Approximate Budget (€)</td>
<td>300,000</td>
</tr>
<tr>
<td>€ invested per beneficiary</td>
<td>10</td>
</tr>
<tr>
<td>constructed wells</td>
<td>1 (plus 1 pending)</td>
</tr>
<tr>
<td>Reservoirs</td>
<td>2</td>
</tr>
<tr>
<td>Pipes &amp; fittings (m)</td>
<td>5,000</td>
</tr>
</tbody>
</table>

The Wukro Water Supply Project is especially difficult to be analysed now, since the project is still not finished. The initial plan was to provide service to 50,000 people which is the expected population of Wukro in 2020 (currently there are around 32,000 inhabitants). However, many changes have been done by the municipality, and currently, the net constructed cannot serve the whole population since there were done much less metres. But the budget was planned for this initial project, and since all the programmes are being analyzed from the point of view of the initial plan, the same is going to be done with this project. So, € 300,000 (what is the budget of the project) would suppose 6 € per beneficiary in the future (50,000 people in 2020) and supposes 10 € per beneficiary if the current inhabitants of Wukro are accounted (around 30,000 people).

5.2.3. Twelve and Fifty Houses Projects

The plan was done as it was initially planned. The missionaries had experience with housing projects before as well as the companies contracted for the construction of those houses. Hence, during the project not to many difficulties appeared.

In the Fifty Houses Project, however, the missionaries were waiting for a German organization to put solar plaques on the roofs of the houses to provide electricity.
Since it is taking too long, the Sisters are currently thinking about connecting the houses to the electrical power network of the city.

Table 16: Basic data Twelve and Fifty Houses projects. Missionaries of Charity

<table>
<thead>
<tr>
<th></th>
<th>12 Houses Project</th>
<th>50 Houses Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of the Project/</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Programme (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beneficiaries</td>
<td>60</td>
<td>156</td>
</tr>
<tr>
<td>Approximate Budget (€)</td>
<td>21,600</td>
<td>36,400</td>
</tr>
<tr>
<td>€ invested per beneficiary</td>
<td>360</td>
<td>240</td>
</tr>
<tr>
<td>Quantity of housing units built</td>
<td>12</td>
<td>52</td>
</tr>
<tr>
<td>House unit construction cost</td>
<td>1,800</td>
<td>700</td>
</tr>
<tr>
<td>sq metre per house</td>
<td>23</td>
<td>20</td>
</tr>
<tr>
<td>House cost per sq metre (€/m²)</td>
<td>80</td>
<td>35</td>
</tr>
<tr>
<td>House price for the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beneficiaries</td>
<td>free</td>
<td>free</td>
</tr>
<tr>
<td>Approximate potential density</td>
<td></td>
<td></td>
</tr>
<tr>
<td>of people per ha</td>
<td>250</td>
<td>150</td>
</tr>
</tbody>
</table>

In the projects of Alamata no official reports have been used and all the data is the one collected in Alamata through the interviews and through one of the donor foundations settled in Barcelona, “Homac Fundació”. Therefore the data is an approximation of the beneficiaries and the total budget.

In the Twelve houses projects it was considered that there were 5 people per house what means 60 people for the 12 houses. However, the average could be higher since it would be normal to have a rate of two people per room, and the houses have three rooms, what means 6 people per house. About the houses of the Fifty Houses Project, they were much smaller and only of one circular room. Those houses had around three or four people per rooms. Staying at an average of three people per house for the total of 52 houses (contrarily to the project’s name which says fifty houses) means that, where as in the Twelve Houses Project 360 € were invested per beneficiary, 240 € where invested in the case of the Fifty Houses Project.

5.2.4 Entoto Integrated Upgrading Development Programme (EIUDP)

The difference between what was initially planned and what was finally executed is not able to know since no enough data is available.

However, as the Entoto Upgrading Development programme final report says, the work done was in general satisfactory. For the final report some interviews were conducted. This is the list where respondents said what was successful and in which order:

1. Access road construction and environmental upgrading program.
2. Community Based Health care Component (both preventive and curative)
3. Education program (both preschool and ACCESS programs)
4. Family planning education and delivery of services in this area.
5. Saving and Credit services of the livelihood component
On the other hand, respondents found as well some things which didn’t work as they were expecting. It follows the list beginning by the weakest points of the programme.

1. The provision of vocational skill training opportunities
2. Creation of job opportunities
3. Solid waste disposal system
4. Water supply service

However the plan was conducted satisfactorily, phasing out was very quickly. Furthermore the government was reorganized due to the reduction of the number of total kebeles in the city of Addis Ababa, what made things more difficult for the programme’s phasing out.

### Table 17: Basic data Entoto Integrated Upgrading Development Programme. PRO PRIDE

<table>
<thead>
<tr>
<th></th>
<th>EIUDP (1997-2004)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration of the Project/ Programme (years)</td>
<td>8</td>
</tr>
<tr>
<td>Beneficiaries</td>
<td>50,000</td>
</tr>
<tr>
<td>Approximate Budget (€)</td>
<td>1,000,000</td>
</tr>
<tr>
<td>€ invested per beneficiary</td>
<td>14</td>
</tr>
<tr>
<td>Water point</td>
<td>5</td>
</tr>
<tr>
<td>Access road (km)</td>
<td>10.4</td>
</tr>
<tr>
<td>Metres of access road per person</td>
<td>0.1</td>
</tr>
<tr>
<td>Retaining wall (m3)</td>
<td>4,124</td>
</tr>
<tr>
<td>Drainage canal (km)</td>
<td>7</td>
</tr>
<tr>
<td>Culvert pipes(km)</td>
<td>1.3</td>
</tr>
<tr>
<td>Metres of drainage canals and culvert pipes per person</td>
<td>0.1</td>
</tr>
<tr>
<td>Money distribution among workers</td>
<td>515</td>
</tr>
<tr>
<td>Other activities included in the budget</td>
<td>Support to educational services, health clinic, some latrine construction, community empowerment activities.</td>
</tr>
</tbody>
</table>

The budget of the Entoto upgrading programme is estimated from the data gotten from the NGO. In 2000 they made a plan about the amount of money they were going to invest in the target kebeles between 2001 and 2005. The total amount expected for the whole activities planned was 5.6 million Birr which is around € 470,000. Since these € 470,000 were for approximately half of the programme, therefore, an approximation of the budget for the whole programme is to double this number. Hence, the total budget considered in this programme is about € 1 million.

Furthermore, it is difficult to know the beneficiaries of the Entoto upgrading programme. It was implemented in 7 kebeles of the inner city, what means that they have a high rate of density. Each kebele can locate from 1,000 to 3,000 houses, with an average of 5 people per house, what means each kebele can have 5,000 to 15,000 people, resulting that in the target kebele could be 35,000 to 100,000 people. On the other hand, the area where was worked could have an extension from 1 to 2 square km. The density in the city of Addis Ababa is from 50 persons per ha to 455 persons per ha, depending on the city area, what means from 5,000 to 45,500 person per square km. Since the target kebeles belong to the part of the city with high density rates, considering 35,000 to 40,000 people per
square km could be a good approximation. It means, again, the target area has a population between 40,000 and 80,000 people.

Making an estimation of the beneficiaries of around 50,000 people and taking the total budget of € 1 million, the EIUDP spend in the target area 20 € per beneficiary for the whole programme.

5.2.5. Condominium Housing Programme

It is difficult to measure the efficacy of the pilot project (1999-2005) of the GTZ since the initial plan of the project is not able for this study. However, the pilot project was a good job to begin the Housing Programme of the Addis Ababa Municipality (2005-2010). In 2004 the plan was to build a minimum of 10,000 housing units per year until 2010, beginning in 2005. No houses were constructed in 2005 due to political problems. At the end of 2006, as it shown in Figure 57 in the fourth chapter, few houses were finished since most of them were still under construction, around 30,000. Currently, 60,000 housing units have been built and the plan is to build around 400,000 housing units for 2010, what is very difficult to achieve but what is at the same time much more than initially planned.

The project was initially sold with the approach to build housing units for low-income people. But the current housing shortage is so acute that many middle class people have problems to own or afford the rent of a proper house, hence these low-middle class people is getting currently these houses of the housing programme.

For poor people it is still quite expensive to afford the prices of the houses, not only because of the price but because of the financiering facilities, since they are not enough accessible for low income people. People who become homeowners have to pay 30 % of the total price at the beginning and are able to pay the rest of the 70 % through a credit conceded by the government. Poor people are not even able to pay the first 30 % of the price, even though many could pay through better financiering facilities.

<table>
<thead>
<tr>
<th>Table 18: Condominium Housing programme. Municipality of Addis Ababa. (Technical advice of GTZ IS)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duration of the Project/ Programme (years)</strong></td>
</tr>
<tr>
<td>Beneficiaries</td>
</tr>
<tr>
<td>Approximate Budget (€)</td>
</tr>
<tr>
<td>€ invested per beneficiary</td>
</tr>
<tr>
<td>Quantity of housing units built</td>
</tr>
<tr>
<td>House unit construction cost</td>
</tr>
<tr>
<td>sq metre per house</td>
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<tr>
<td>House cost per sq metre (€/m2)</td>
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<tr>
<td>House price for the beneficiaries</td>
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<tr>
<td>Approximate potential density of people per ha</td>
</tr>
</tbody>
</table>

When the services of GTZ IS were contracted, the aim of the Addis Ababa Municipality for the Housing Programme was to build a minimum of 10,000 housing units yearly during 5 years for a total of € 60 millions. Currently, 60,000 housing units have already been built and the plan is to build 400,000 more housing units. However, since no information is available about those costs, the analysis of this programme is going to be done with the data from what was
initially planned, it means, 50,000 housing units in 5 years for a total budget of around € 60 millions. The number of beneficiaries corresponds to the 50,000 housing units supposed to be constructed to an average of 5 people per house (an average used by the UN-Habitat in Addis Ababa), what means 250,000 beneficiaries for the whole project resulting in, as shows Table 19, an investing per beneficiary of 240 €.
5.3 Actors’ involvement and appropriate technologies

At this level the actors activities and their involvement, including the participatory process of the community and the appropriate technologies are analysed. It is analysed if the actions carried out by the different actors where appropriate and pertinent.

This level of comparison is mainly the actors’ involvement, their role in the project, their decision making, the participation level of the beneficiary communities and the use of appropriate technologies.

The actors’ involvement is a very important aspect to note in the projects. It is important to know who is in charge for taking the main decisions, where does the money come from, if it is a local initiative or an international one and if the government of one or more countries or regions are involved. The participation level of the community and the general community empowerment is an important aspect of the project since it can be decisive for the approval of the whole project either by the community or by the local government.

Furthermore, another important issue is the decision of using one technical solution or another one for implementing a project. This decision can make the project sustainable in time since things can be repaired by the beneficiaries or, the opposite, can result in that any small reparation becomes fatal for the future functionality of the project.

5.3.1. Water Bank Programme

The Water Bank programme has two differentiated levels. The first level is the whole Water Bank programme as itself. It includes the institutional relations that Intermón Oxfam has with other big NGOs and the Federal Governments of Ethiopia or with the municipality of Addis Ababa. The second level is the one found in every single water supply project. It includes the relations with the community leaders and the local kebele and woreda governments.

Both levels are related, but since some of the relations are for the whole process and some of them are only for the different single projects, the presentation of the actors involved in each case is going to be presented separately.

5.3.1.1. The actors

Intermón Oxfam’s Water Bank programme

The donors of the whole Water Bank programme have been different in the three different rounds. The main donors have been different regional governments of Spain. The “Generalitat de Catalunya” has been an important donor of the programme since, through its cooperation agency (“Agència Catalana per la Cooperació al Desenvolupament Humà”) has assured a donation for the three first years, what was the time initially planned to implement this program. The importance of giving money for three years relies on the long term planning that Intermón Oxfam can do because they already know they will have this financial support. To the moment, the program has been prorogued a fourth year.
“Enginyeria Sense Fronteres” made a technical advice by writing a manual about the different techniques that could be implemented for the water supply infrastructure, depending on the different geographic zones of Ethiopia, the communities, their income and the natural resources.

Additionally, Intermón Oxfam Ethiopia is carrying an important networking and advocacy task. On one side, the networking is being done through different important organizations and movements. In Figure 59 is shown the main networking works. The first is with the umbrella NGO called CRDA. They make different seminars to share experiences of water supply projects and to plan new strategies for making advocacy more effective. The second movement is the one called WASH, which is a worldwide water, sanitation and Hygiene promotion movement and which has a branch in Ethiopia as well.

With of all the experiences sharing and all the seminars done, advocacy is made to the different governmental levels and institutions. Advocacy is an important part of the Water Bank programme since the government is getting a lot of money from different organizations to be invested in water infrastructures and in sanitation and hygiene policies.

As well as the donors have changed during the three years, the local counterparts in charge for doing the projects have changed as well being a total of 6 NGOs.

**During execution of Sole Chefa Water Supply Project**

After explaining the general context of the Water Bank programme, the involvement of the actors that participated in the *Sole Chefa Water Supply Project* is explained since it was the project visited and can be used as an example of the projects that have been done to the moment through this country level programme.

In this case, the local NGO EOC-DICAC has been the main executor of the project. They have been the local counterpart and they were the one really in charge for
carrying the project out. With the technical and management assistance of Intermón Oxfam, they were in charge for writing the project document, involving the *woreda* water bureau and at least one engineer (or somebody with technical knowledge) of the community. This is a key factor for the future transfer of the project, what implies maintenance works, reparations and network extensions in the best of the cases.

However, since the infrastructure has to be managed and not only maintained and repaired, the project includes the creation of an Administration Office, to charge the water use and maintain the infrastructure. A water committee and a board are created and trained as well for taking decisions of different importance.

![Figure 60: Actors involvement and relationship in the Sole Chefa Water Supply project in behalf of the Water Bank programme](image)

### 5.3.1.2. Participatory process

The community work is among the best things of the Water Bank programme. The community involvement is a prerequisite for doing the project and in case they do not participate enough the project is stopped. On the other hand, if a project runs out of time and there are still some community or management issues that are not working appropriately, the project is prorogued until achieving the adequate capacity level for a good management of the infrastructure.

This was the case of *Sole Chefa Water Supply Project*, some community members were not doing their job appropriately and the project had to be prorogued six months for assuring everything was going to work correctly.

The training is not easy with people that may not have gone to school or do not have an adequate educated level. Explaining the job and expecting everybody is going to do as they were told is not enough. A first explanation has to be given and a first intend of doing it has to be done. Afterwards, the mistakes have to be
explained and corrected in a second try. And only after repeating the work that has to be done it is possible that the community understands their job for the good management and maintenance of the infrastructure.

5.3.1.3. Appropriate technologies:

Special care has been taken in the technologies used in the different projects of the Water Bank programme. As explained above, a technical manual was done by “Enginyeria Sense Fronteres” (ESF) to standardise the different possible solutions of the different water situation contexts that were to find in the different communities of the different work areas of Ethiopia.

This manual takes care about the magnitude of the water shortage problem, the possible resources and, among others, the economical incomes of the communities in contraposition of the cost for making the infrastructures new and for maintaining it.

Furthermore, the local NGO in charge for the implementation of the project makes that the woreda water bureau designs the project in collaboration with an engineer of the kebele, providing a technical advice. Since the woreda water bureau and a local engineer, or at least somebody with technical knowledge, participate in the process of designing the infrastructure, they selves are afterwards capable for making a good maintenance, proper reparations and even some network extensions. It has actually been the case of the Sole Chefa Water project, were a pipe extension and three water points were executed by the community and the woreda after finishing the project with the NGO.

5.3.2. Wukro Water Supply Project

As explained before, the Water Supply project is in a context of many other social projects that are being carried out by Ángel Olarán, in the small city of Wukro. These Social Development Projects are supported by many organizations, mainly from Spain. Of all of the projects, the most important is the Orphan program.

Interesting about the actors’ involvement is the change of responsibilities it has been taking place from 2005, since a new office was opened to carry out all the development projects Ángel Olarán was in charge for.

5.3.2.1. The actors

During Project Execution of the Wukro Water Supply Project

The aim of the Wukro Water Supply Project was providing water to the Agricultural and Commerce school and, additionally, to use this infrastructure to provide water to more people of the neighbourhood.

As seen in Figure 61, the project was mainly funded by the Basque Country Government, however, ten percent of the budget had to be paid by the Wukro Municipality.

The design of the project was done by the Spanish NGO “Ingeniería para la Cooperación”. After redaction of the document, many changes were done by the Wukro Municipality resulting in a simplification of the project.

The execution of the project was carried out by the Wukro Water Supply Office, which depends on the Municipality.
The counterpart of “Ingeniería para la Cooperación” was officially Adigrat Dioceses Catholic Secretariat (ADCS), but in fact, the real interlocutor was Ángel Olarán, a White Father community member. It was firstly thought that the counterpart had not to be necessarily a technician since it was thought it was more important to have and interlocutor with good communication skills and knowledge of the town and the municipality.

Nearly everything run well until the mayor of the town changed. The two mayors that followed the first one did not show any interest for making the project and even less for paying it.

Since with the two last mayors it is becoming very difficult to achieve a solution to finalize the project (constructing the last well and connecting it to the network), Ángel Olarán and the first mayor are having conversation to try to achieve a proper end for the project.

After totally transferring responsibilities to the new Development Office

Two years ago (in 2005/06), a new Development Project office was created to carry out all Ángel’s Development projects. The plan is that the office gets all the responsibilities transferred in approximately one year time.

It means that all the donations that were being given to Ángel Olarán will have to be given to the Development Office, and this office will be in charge for the new Wukro development projects.

This office will have to act as a counterpart for all the future international NGOs willing to work in Wukro. A new Water Supply Project in the future would go through this Development Office and not through Ángel Olarán anymore. Ángel Olarán is only going to be in charge for the Agricultural and Commerce School.
5.3.2.2. Participatory Process

During the project no community empowerment or participatory process has been done. However, with the new Development Office and through activities like the Agricultural Cooperative, it is going to try to empower more the community.

5.3.2.3. Appropriate technologies

The technologies used in this project have not been thought for being implemented by a community. The project document was designed for being constructed and implemented by the Wukro Water Office. Furthermore, the Wukro Water Office have done many other water supply projects, since the city already has a water supply network which provides water to public fountains as well as to private users, who have to pay for the connection to the infrastructure.

5.3.3. Twelve and Fifty Houses Projects

5.3.3.1. The actors

The 12 and 50 Houses Projects of Alamata have not as many actors involved as in the other visited projects. As shows Figure 63, the main actors of these projects are the Missionaries of Charity. They decide where to make the project, what kind of project and who are the beneficiaries.

The main donors of this project are different German organizations and a Spanish foundation settled in Barcelona called “Fundació Homac”.

Figure 62: Expected actors involvement and relationship after finalization of the project and total transfer of the duties to the New Development Office
As has been commented above, this project is not a development project as it is currently understood, since it is a charity project and it has to be seen from this point of view.

The construction companies are contracted by the Missionaries. They normally work with the same three Italian construction companies.

The quality and construction control is done by a man who belongs to the Missionaries of Charity. He is an engineer and an important technical advisor for the Sisters of Charity.

The municipality of the town gives the plots to make the houses and doesn’t charge any taxes, since the land belongs to the government. They are totally helpful since the Sisters are helping the Municipality with the poorest of the town.

The Municipality asks the houses to be done as it is stated in the Alamata Master Plan. The 12 houses project was done as it was stated in the Master Plan, however in the 50 houses project it was not. The Master Plan says that new houses have to have a kitchen. The 12 houses were done with kitchen, but the beneficiaries were using it as a normal room and were cooking outside as it is traditionally done. Therefore, the 50 houses were done without kitchen.

**5.3.3.2. Participatory process**

The participatory process is inexistent since the Missionaries of Charity take all the decisions. The community only plays the role of being the beneficiaries (getting the goods).
5.3.3.3. Appropriate technologies:

In this project, the appropriate technologies have another meaning than in the Addis Ababa housing programme.

The main goal of this project is how many houses are done and what their quality and shape are like. The price of each house is not as important neither the construction methodology, since it is done by a construction company.

The aim of this project is to make a house in which the beneficiaries feel comfortable. This is the reason why, for example, the houses of the 50 Houses Project have a circular shape. It is not for cheap construction criteria neither for the easiness of the constructing method, but because the very poor rural and non-educated people feel good inside the circular house, since they have always been living in traditional circular wood houses.

In this context, the technologies used take more care about the results achieved than about how to achieve them. It is more about the appropriate use of the house than about the construction of it.

5.3.4. Entoto Integrated Upgrading Development Programme (EIUDP)

PRO PRIDE’s project is an integrated project that attends many sectors of the underlying factors of poverty. Therefore, many aspects and many areas are taken into consideration involving this way many actors.

5.3.4.1. The actors

PRO PRIDE began its activities in the target area because it was requested by ActionAid Ethiopia, the Addis Ababa Municipality and by CRDA, since a previous NGO working in the area was closed by governments decision.

The main donor of PRO PRIDE is ActionAid Ethiopia. However, other donors give, as well, their support to PRO PRIDE’s activities as shown in Figure 64.

The main aspects of the project are health, education, livelihood improvement, environmental upgrading and crosscutting aspects that affect poverty.

Any action of the NGO in any area has to have the approval of the corresponding Ministry. Therefore, PRO PRIDE had to arrive to agreements with the Sanitary Ministry to create a Polyclinic; with the Educational Ministry to create new schools and to be able to make informal educational programmes; and with the Finance Ministry because PRO PRIDE has different micro credits programmes, which needs the authorisation of the correspondent Ministry.

A Health Kebele Committee was created and capacitated to carry out the tasks related with the polyclinic. One of the problems of this committee came when after the programme some kebele administration were reorganised and some of these members had to be substituted.

What refers to community members involved in the project, most of the decisions were taken according firstly to previous studies and secondly to the willing of the community leaders and the local government.
Two different educational groups were created to carry out the ACCES and FAL programmes. Furthermore, the Save and Credit Group (SAC) was created to benefit from the credits given by PRO PRIDE in his programme.

Through the credit programme, some new micro enterprises were created. These private micro companies were financially supported through the credits and were advised, as well, to achieve their goals and getting benefits from their activities.

The upgrading infrastructural aspects (such as toilet location, quantity and location of the water points) were decided with the local government and community leaders. In the first phase of the programme, the workers were food insecure households to enable them to get a salary income for getting at least two or three daily meals.

5.3.4.2. Participatory Process

As explained in Chapter 4.4 and in the actors’ involvement, the participatory process was constant and the decisions were always taken with the community leaders. For PRO PRIDE is one of its main goals, to let the people participate in the decisions process. As PRO PRIDE’s director, Digafe Falaka, says: “if the community knows and demands for their rights, as for example water coverage, then it becomes possible to provide them with adequate service coverage, either through an NGO or through the government. If they don’t know their rights or do not ask for them, then it is difficult for them to get their needs covered”.

Community empowerment was the first issue treated, even before beginning the project and taking any decision, since it had to be assured that the community
would respond. Therefore, the community leaders had an important role by all the decisions made before, during and after launching the Entoto Integrated Upgrading Development Program.

5.3.4.3. Appropriate technologies

The Entoto Integrated Upgrading Development Programme was always done through decisions taken with the community leaders and other community associations. Therefore, the technologies used were always implemented with the approval and cooperation of the community.

5.3.5. Condominium Housing Programme

As stated above, the housing programme of the GTZ has two temporal parts. See Summary ¡Error! No se encuentra el origen de la referencia. in page ¡Error! Marcador no definido.

Firstly, the GTZ made a pilot project in collaboration with the Ethiopian Ministry of Federal Affairs. This project was implemented in different parts of Ethiopia as well as in Addis Ababa. It was carried out between 1999 and 2005/06. The aim of the pilot project was to find a Low Cost Housing Construction solution in the different regions of Ethiopia. The second part of the programme began when the municipality took the Low Cost Construction technology to implement it in a Housing Programme all over the city. For this project the services of GTZ IS were contracted to contribute as a management advisor from the planning to the construction of the housing buildings.

5.3.5.1. The actors

Low Cost Housing Construction Pilot Project. 1999-2006

The GTZ has been working with the Ethiopian government for more than 30 years and they have an office in the Addis Ababa municipality since 1995. The participants and the relationships between the different actors during the pilot project is the one resultant of many years of cooperation and special agreements between the German and the Ethiopian governments. As it shows Figure 65, the German and Ethiopian agreements are supported as well by the financing of many projects through the development banks KfW and DEG.

The GTZ advises about management, planning and technical aspects in governmental tasks, either to the central government or to different municipalities of Ethiopia. Therefore, during the implementation of the pilot project, the GTZ was especially collaborating with the Ministry of Federal Affairs, since it was a project in the whole Ethiopia, even though many buildings were constructed in Addis Ababa, as well.

The pilot project was more than a search for Low Cost technologies. It was about finding new methodologies applicable in Ethiopia. For the methodology and the training tasks to the different workers, the collaboration with the private company MH Engineers was fundamental.

Important of mentioning is that through the collaboration of the GTZ with all the Ethiopian institutional levels, a draft of urban planning legislation and a building code have been drafted and have been discussed in the parliament.
Figure 65: Actors relationship and participation during the Pilot Project of the Low Cost Housing Construction

Figure 66: Actors relationship and participation during the municipality housing programme, with the contraction of the services of GTZ IS
Addis Ababa Municipality’s Housing Programme

Because of the housing shortage in Addis Ababa, some interventions had to be taken by the municipality. The municipality launched a big housing programme in 2004/05 and contracted the services of the GTZ IS for implementing the Low Cost Technology experimented with GTZ and the private company MH Engineers.

As stated before, the GTZ IS is owned by the German Government but acts as a private company, which benefits are reinvested on international developing project. Therefore, the municipality is paying to the GTZ IS for its services. The services of the GTZ IS are basically advisory on the implementation of the project. They participate in the election of the sites to build, on the type of houses, the technical planning, the construction and implementation, in the daily training of the workers and in the creation of micro construction enterprises among others. All this is always done in collaboration with MH Engineers, the main construction company in the condominium housing project.

The training on the job is, as well, one of the fundamental parts of the programme. Firstly, because it improves the quality of the houses being built and, secondly, because it is an indirect capacitating program for mainly youth people that learn a profession and that can use their abilities in the future for getting a job.

5.3.5.2. Participatory process

The participatory process stays mainly at the implementation level and mainly with the construction companies. Since the programme is a municipal programme, even though the GTZ and the GTZ IS do their advice job on the different decisions, the main decision maker is the Addis Ababa Municipality.

The main decisions of the housing units that are being built and that are to be built are already made, since they follow the Addis Ababa Master Plan (which was also made with the technical advice of the GTZ). The Master Plan contemplates already the different social and economic aspects that are to be found in the Addis Ababa city, since many studies were done during the writing of the document.

5.3.5.3. Appropriate technologies:

The appropriate technologies implemented for the Low Cost Housing Construction is one of the main factors of this programme. The GTZ made a specific pilot project for implementing these technologies since the housing construction had to be both, cheap and easy to implement. A lot of research work was done even with private companies, mainly with MH Engineers, to find a cheap solution to build many houses. Construction manuals have been done and training on the job is regularly provided to the workers to increase the quality of the construction and to upgrade their abilities, which afterwards can be used in other jobs.

The methodology was specially thought for the Ethiopian country, thinking on their resources, their cost and in the different environments that the country has all over the land.