

# NEGOWAT

Facilitating Negotiations over Land and Water Conflicts in Peri-urban upstream Catchments



## RESEARCH REPORT N° 2

### Lands Market in Tiquipaya Period 1997-2003

Alberto Lizárraga



Cinquième  
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**Andean Centre for Water Management and Use**  
**NEGOWAT Project: Facilitating Negotiations over Land and water Conflicts in**  
**Peri-urban Upstream Catchments**

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### **Lands Market in Tiquipaya** **Period 1997-2003**

**Alberto Lizarraga**

**FOUNDED BY: INCO-DEV, CIRAD, FAPESP, DFID**  
**Cochabamba, Bolivia, May, 2006**

The NEGOWAT Project (Facilitating Negotiations over Land and water Conflicts in Peri-urban Upstream Catchments) is a research project developed in Cochabamba (Bolivia) and Sao Paulo (Brasil). It is focused to develop tools to better understand water related competition and conflicts among different stakeholders in these areas.

In Bolivia, the NEGOWAT Project is executed by the Andean Centre for Water Management and Use (Centro AGUA) and the Study Centre of Social and Economic Reality (CERES). The Centro AGUA is an education and research centre of the Faculty of Agriculture and Livestock Sciences (FCAyP), San Simon University (UMSS).

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## SUMMARY

The study “*Lands Market in Tiquipaya*” it is bounded to the districts 4, 5 and 6 of this municipality and it is excluded from it to the area of the “*Casco Viejo*”, to be considered urbanely consolidated. The outlined objectives were to describe the dynamics of the rural and peri-urban lands market to determine the factors that impel the change in the land use.

Inside of the market scheme, the analysis of the offer is carried out starting from the warnings registered in the local written press, but the analysis of the demand and land use, are carried out starting from the sale and purchase documents (minutas) and of the technical records over land use existent in the files of the Governorship of Tiquipaya. Additionally, for both topics, municipal documents are used that allow us to know which it is the legal and normative treatment that one gives to the lands of that municipality.

The research discoveries show that, it is a dynamic market characterized by the high prices of the lands, and by offer and the trade of small lands. About the land use, it was possible to notice that, it is common that the land owners infringe the established norms. Much has to see in it the labor of the authorities and municipal officials that give course to all type of applications.

## **PART ONE: MANAGING PLANS OF TIQUIPAYA**

A managing plan is a planning tool that can be applied, for example, to labour, investment, land use, and equipment distribution. In the managing plan, general instructions and basic guidelines are determined pointing out the objectives and priorities. It constitutes a flexible and an open instrument that encompasses a set of informative and qualifying elements, components and tools that are put at disposal for public administration and for social actors. Its implementation cannot be the result of improvisation and it must be based on a previous planning.

The managing plans of Tiquipaya may be considered normatively as technical tools of the municipality for the administration and control of land use. These are directed fundamentally to preserve productive areas and to propitiate better inhabitable conditions for the population in the area.

### **1. FRAMEWORK OF THE MANAGING PLANS OF TIQUIPAYA**

During the last twenty years, the municipality of Tiquipaya has had three managing plans: Managing Plan of Tiquipaya 1984, Sectored Managing Plan of the Cochabamba – Tiquipaya Urbanization Axe 1993 and the Urban Rural Managing Plan 1997.

The Managing Plan of 1984 was part of a much larger plan named Urban Micro Regional Plan which was understood as a “systematized set of forecasts and general guidelines for development ;therefore, the Micro Regional Plan constituted “the general reference framework to what the sectored and spatial planning instances [must] be ruled” ” (CORDECO – HAM, 1992:9).

According to the Micro Regional Urban Committee<sup>1</sup> (1992), the election of Tiquipaya as the first one to have a Regional Managing Plan was based on the following:

- Its advantageous situation, in relation to Misicuni Project which will intensify its agricultural activity almost immediately.
- Its condition of Satellite Centre according to what was established in the spatial framework of the Regional Strategy based on its agricultural dynamic.
- The expectancy of spatial expansion of the urban net in its surrounding areas.
- Its almost immediate and direct spatial-functional relationship with the mass of Cochabamba.
- Its vial relationship of interurban character.
- The non-existence of technical capacity in the municipality for the management of urban issues (CORDECO - HAM, 1984 en CORDECO - HAM, 1992).

It is important to emphasize that the area of influence of the Managing Plan of 1984 did not encompass the whole municipality of Tiquipaya but part of what nowadays constitutes the 4<sup>th</sup>,

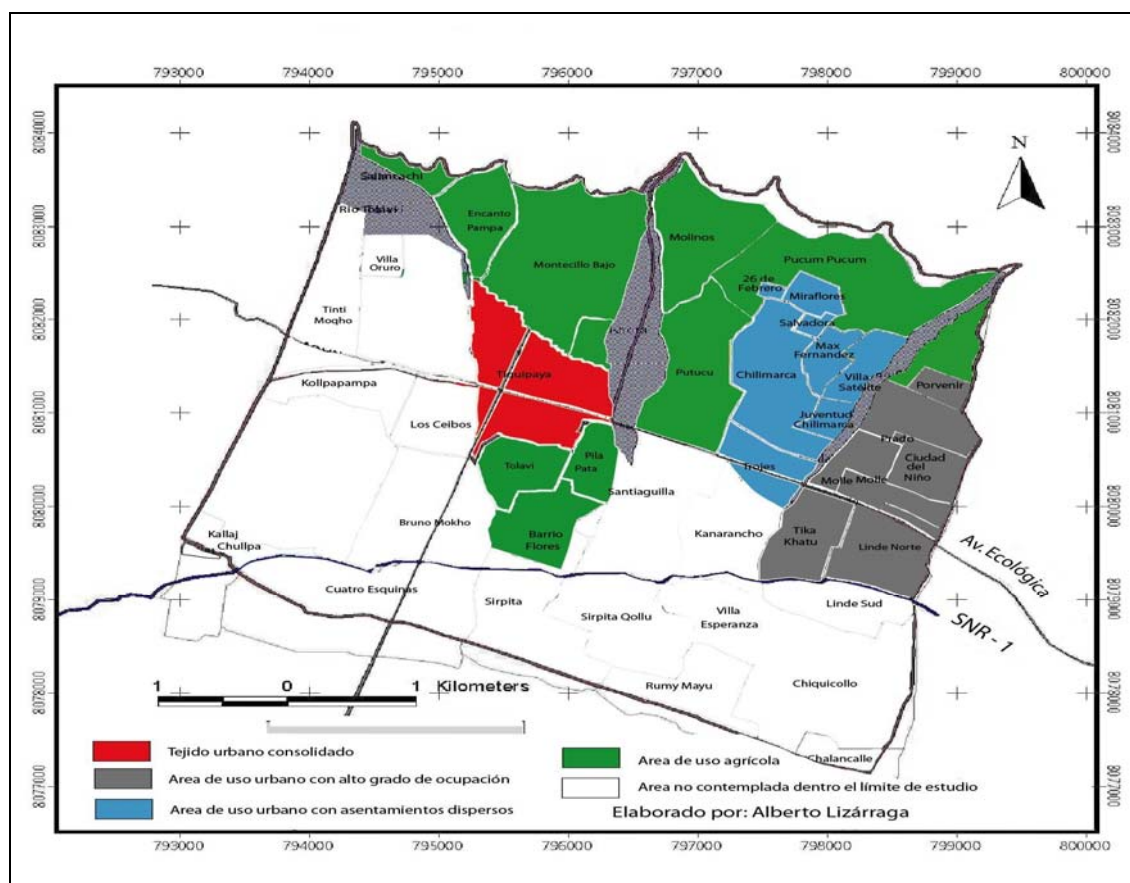
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<sup>1</sup> The Micro Regional Urban Committee was constituted by the Decree of 5th July 1979. “To promote the elaboration of Planning or Urban Ordering Tools for the Minor Cities in Cochabamba Region” was one of its established functions (CORDECO – HAM Cochabamba, 1993:9).

Source: Own elaboration based on the Urban Microregional Committee, 1984, in: Comité Urbano Micro regional, 1992.

- Lack of control of Cochabamba Municipality.

- Abuse in the jurisdiction and competence of Tiquipaya Municipality that approved urbanizations, fractioning plots below 5000 m.<sup>2</sup>. It also approved residential constructions, setting street lines and other procedures that meant breaches to the Urban Rural Managing Plan of Cochabamba (PDRUC, acronym in Spanish) and to the Law 556, considering that the Managing Plan of Tiquipaya only granted technical jurisdiction and competence over the urbanization limits defined in that plan. According to the Municipalities' Organic Law, the intervention of the Municipality must be confined to those limits.
- Illegal pursuits (without any procedure) of "reallocated miners" and of other poverty-stricken groups that have justified their attitudes for their economic condition.



Source: Own elaboration based on the Urban Microregional Committee, 1993.



considered that “the mentioned instrument did not [require] a substantial modification since the expectancy of urban area occupancy delimited in the said Managing Plan, [was] not covered not even in a 50 % according to what was foreseen” (op. cit:8). Thus, the critic area defined by the Plan was confined to *Cruce Taquiña – Tiquipaya* urbanization axe that on the date of the statistic information collection -1993- had 6000 inhabitants. This element, according to the technical team’s point of view, had “an impact of tremendous magnitude on micro regions more profound than in *Vinto, Tiquipaya* and *Sipe Sipe*”. That is, the 1993 Managing Plan increased its study area from 761 to 884 hectares starting from the *Khora* river (Tiquipaya ravine) the eastern limit of the former plan, in direction to the east up to the margins of Taquiña ravine; for the rest, the northern limit was still at level 2750 while to the south, the Irrigation System N° 1 was established as the limit. In 1997, a modification of the 1993 Managing Plan maintained the study area limits and the categorization of land use, modifying and incorporating, however, new subcategories of use. It has also adopted a different name since then as the Urban Rural Managing Plan. Its modification was justified because the policies and guidelines established in the former managing plan were not adapted to the current context, a general conclusion shared by the municipality after studying and discussing the main problems of the municipality. These were the specific conclusions:

- An alarming disproportion between urban and rural territory especially in the mountainous region which was low in density, as well as the striking absence of basic service infrastructure.
- The evolution of the urban perimeter due to migrations and land availability configured two areas interconnected by *Taquiña* Avenue, the city and the urbanizations bordering the Cercado province.
- The weak articulation of roads did not allow a self development but a dependent development on the capital city.
- The main environmental problems had their origin in the human depredation, ravine erosion and lack of water and sanitation infrastructure
- The administration of the urban processes deserved a new way of management of public services to solve the problems and to monitor the application of the plan (Tiquipaya Municipality, 1997:13-14).

Differently elaborated from the two former managing plans by technicians, of the Urban Micro Regional Committee, the Urban Rural Managing Plan was elaborated by technical personnel of the Tiquipaya Municipality.

## **2. DIAGNOSIS OF LAND USE AND PROPOSALS OF USE MAPS**

The 1984, the Managing Plan of Tiquipaya indicated that, in that year, there was a strong trend of land use change and decrease of agricultural activity “becoming an activity aimed more to self consumption than for the market” (CORDECO–HAM, 1984 en: CORDECO–HAM, 1992: 31). Among its characteristics were a manifest occupational informality and a dependence on Cochabamba City regarding employment. From this facet, it was concluded that the processes of land use change were not initiated with the validity of the new economic policy established in 1985 as alleged; but certainly it has deepened since then with the migratory wave produced by the the miners’ lay-off.

Thus, the study area, considered within the first Managing Plan, had a population of 2036 inhabitants distributed in three zones, showing clearly defined social groups in the mid-eighties. Two of them encompassed the high class (people with enormous economic power) and mid class that had occupied agricultural lands and that stayed in Tiquipaya just to sleep because their main activities were held in Cochabamba city and the other, impoverished sectors, that occupied lands in risky areas. Although the most usual way to access to land was through the market in case of poor people, it was also possible through spontaneous establishments, that is, land purchase from land intermediaries and government endowment. The diagnosis showed a predominance of agricultural lands over urban lands with problems such as: “*minifundio*”, the production for self consumption, scarce irrigation, the inequitable distribution of water, crop production in inadequate lands and erosion of ravines that made the urban growth difficult to stop. It also indicated that the urban area was intended mainly to residential function with great shortage in equipment matter (op. cit: 39, 40).

**Table 1. Social groups of Tiquipaya, zones of occupancy and ways of access to land until 1984**

Characteristics/ kinds of advance	Advance of poor class (look for cheap plots)	Punctual advance or of great economical power	Of upper middle class groups
Social condition	Immigrants from high lands	Former ministries of great economical power and other kindred people	Upper middle class
Occupancy zone	Plots in streams, <i>Chillimarca</i> and <i>Trojes</i>	Northern zone ( <i>Montecillo</i> ) within agricultural area	In the way to <i>El Paso</i> on the best agricultural lands
Kinds of access	Planes signed by architects, land endowment to poor farmers through political instances, spontaneous occupancy and purchase from intermediary agents	Purchase	Purchase
Dwelling characteristics	Precarious dwellings	Luxurious dwellings	Good quality dwellings
Allocation of group interests	Within Tiquipaya	Out of Tiquipaya	Out of Tiquipaya

Source: Self elaboration on the basis of Micro Regional Committee, 1984, in: Comité Urbano Micro Regional, 1992.

Thus, a land use map was outlined, showing three categories. It became the normative and restrictive measure on land occupancy and its ways of use in urban and rural environments (Table 2). In 1993, when a new managing plan entered in validity, the categories of the former plan were modified. In the same way, the study area was enlarged from 761 to 884 hectares. Comparing the diagnoses of 1984 and 1993, it was possible to see that there was a decrease of agricultural land from 707 to 587 hectares and an increase of urban area from 55 to 297 hectares, which, in terms of percentage, meant an urban growth of 445 % in a period of nine years. It should be added that the demographic growth for the study area since then increased from 2036 inhabitants in 1984 up to 6809 in 1993 (234 %) with most of the population (80 %) living in areas considered of urban expansion.

In the same diagnosis, it is indicated that the grade of consolidation of urban areas with high grade of occupancy was greater than in other areas; the socioeconomic characteristics of its population were similar to the ones in zones of urban use with disperse establishments (middle and low classes), but there was a notorious difference between the owners in these two zones and the owners of the agricultural use area, who were the former owners of plots in the zone. Another percentage was for the middle and high class population that, in some way, raised an expectancy based on the “status”. That meant living in a “fashion neighbourhood” in Cochabamba city, far away from the “worldly noise” (CORDECO – HAM, 1993: 18). Finally, the managing plan of 1997, different from the former two plans, did not have a diagnosis about land use. The soil map –general categories- did not suffer any modification regarding the one established in the Managing Plan of 1993, but some subcategories changed. An illustration of the said changes is presented as follows:

**Table 2. Plans of land use of Tiquipaya**

Plane of use 1984	Plane of use 1993	Plane of use 1997
1. Limit of construction a) Limit of the area allowed for urbanization in an intermediate term b) Limit of the urban domain in the long term 2. Sectors of contiguous edification a) Zone of preservation of the historical architectonic patrimony b) Zone of high density 3. Sectors of isolated edification a) Zone of low density b) Zone of low density II c) Zone of orchards d) Public green areas e) Public equipment f) Public equipment in agricultural periphery g) Small industry and processing of agricultural products	1. Urban land <sup>2</sup> 2. Land allowed for urbanization <sup>3</sup> a) Area of high-priority urban expansion b) Area of urban regulation c) Area of urban reservation (familiar orchards) 3. Land not allowed for urbanization <sup>4</sup> a) Area of agricultural preservation b) Area of natural risks (security strips of ravines) c) Tunari National park	1. Urban land 2. Land allowed for urbanization a) High density area b) Area of urban regulation c) Area of image preservation 3. Land not allowed for urbanization a) Area of exclusive agricultural and livestock use b) Area of protection and incentive to floriculture c) Area of forestall of poultry exploitation d) Forests e) Windbreak curtain in agricultural area f) Wells and streams to preserve g) Zones of protection of water resources h) Tunari National park

Source: Self elaboration on the basis of Micro Regional Committee, 1984, in: Comité Urbano Micro Regional, 1992. Comité Urbano Micro Regional, 1993. Alcaldía Municipal de Tiquipaya, 1997.

On the other hand, Table 3 indicates the zones of occupancy, the possibilities of authorized urbanization and the compatible land uses.

<sup>2</sup> Within urban land are considered areas of urban character with higher grade of consolidation, therefore with higher residential density including commercial and service activities.

<sup>3</sup> According to the Managing Plan of 1993 the sub/areas of high-priority urban expansion, urban regulation and urban reserve were susceptible to be incorporated to the urban perimeter in an intermediate and long term.

<sup>4</sup> The area not allowed for urbanization is the area where the urban use is not admitted and is protected by the Law 556 and the Misicuni Project: Its use is for agriculture, forestry and in some cases for special equipments.

**Table 3. Zones of occupation, compatible functions and minimum dimensions of plot**

Managing Plan of 1984				Managing Plan of 1993				Managing Plan of 1997			
Sector or zone	Main Function	Compatible uses	Minimum area	Sector or zone	Main Function	Compatible uses	Minimum area	Sector or zone	Main Function	Compatible uses	Minimum area
High density	Residential	Small Store	350 m. <sup>2</sup>	High-priority urban expansion	Individual and partly collective housing	Neighborhood trade, small industry	350 m. <sup>2</sup>	High density	Individual and partly collective housing	Trade, small industry, workmanship	250 m. <sup>2</sup>
Low density	Residential	Small Store	500 m. <sup>2</sup>	Urban Regularization	Individual and partly collective housing	Neighborhood trade	500 m. <sup>2</sup>	Area of urban regulation	Individual and partly collective housing	Neighborhood trade	500 m. <sup>2</sup>
Low density II	Residential	Small Store	1.000 m. <sup>2</sup>	Urban Reserve	Isolated individual housing	Familiar orchards	1.500 m. <sup>2</sup>	Area of image preservation	Isolated individual housing	Not specified	250 m. <sup>2</sup>
Orchards zone	Agricultural function	Buildings for support to agriculture	1.500 m. <sup>2</sup>	Area of agriculture preservation	Agricultural function	Complementary to agriculture	Not specified	Agricultural area	Agricultural function and isolated individual housing	Familiar orchard, livestock and agriculture	5.000 m. <sup>2</sup>
Public green areas	Uso público recreativo	Building activities are not allowed	Not specified	Area of natural risks (segurity strips of ravines)	Danger zone. Human establishments are not accepted	Recreational fields, sport fields and forestation	Not specified				
				Tunari national park	Urban residential activities, material extraction and livestock are not accepted	Subjected to special regulation	The Law 1262 of 13/09 /91 determines as southern limit the level 2.750 between Kenko Mayu and Parotani ravine				

Source: Self elaboration on the basis of Micro Regional Committee, 1984, in: Comité Urbano Micro Regional, 1992. Comité Urbano Micro Regional, 1993.

### **3. OBJECTIVES OF THE LAND USE POLICIES**

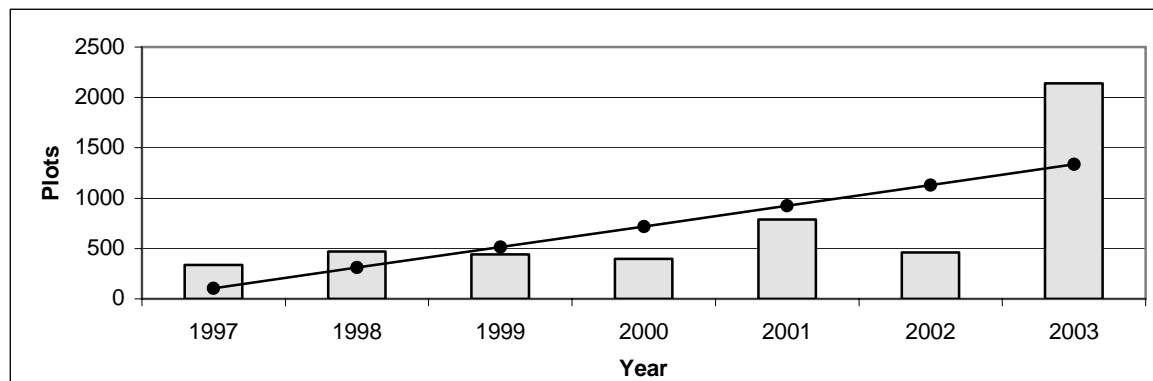
The main objective of the three managing plans described previously was to regulate the spatial occupancy protecting the agricultural lands. Regrettably, that aim had not been accomplished due to factors such as: approval of urbanizations by the municipality of Tiquipaya against the established norms and illegal occupancies of laid off miners, to give some examples. The numbers are also eloquent since agricultural land decreased from 707 hectares in 1984 to 587 hectares in 1993, being consumed by the urban perimeter 17 % approximately. This trend has been much more chaotic with passing years. These statements are endorsed by recent studies (Rocha, 2004) in which it is indicated that the urbanized land in 2003 was 1806 hectares; while in 1984 it was 55 hectares and in 1993 it was 297 hectares.

Despite the factors causing the occupancy of agricultural lands for urban uses and the careless management of municipal authorities unable to stop this situation, it should be manifested that the managing plans were weak because they were elaborated exclusively by technicians of public and private institutions with a minimal participation of civil society through some representatives. In this way, according to certain studies, the distribution of space and the kind of uses that they should have were determined by other agents who, in reality, decided the appropriation and use of land either through the market, spontaneous occupancy or through other means. Therefore, the land use changes and their consequences were the result of an excluding planning that did not allow the social control. It never consulted the population about the uses that the land should have and about the ways of carrying out its occupancy.

## PART TWO: LAND OFFER IN DISTRICTS 4, 5 AND 6

### 1. TEMPORARITY AND SPATIALITY OF THE OFFER

During the study period 1997 to 2003 the newspaper registered 5039 offers of plots from which the highest frequency corresponds to 2003 with 43 % and the lowest to 1997 with 7 %



**Figure 3. Offer of plots in the Tiquipaya municipality, 1997-2003**

Source: Own elaboration based on LosTiempos, January 1997 to december 2003.

Figure 3 compares the offer frequencies by year. It reports oscillations that show increases and decreases in the land offer quantities; it can be seen even a consecutive decrease during 1999 and 2000. However, the straight line in the same graph indicates that the general trend has been an enlargement in the market offer<sup>5</sup>

Taking into account the spatial issue of the territory, it should be mentioned that the land was offered to 26 communities. 90 % of this land was offered to six (*Tiquipaya –old town-, Trojes, Chilimarca, Kollpapampa, Ciudad del Niño y Linde*); 7 %, to five (*Chiquicollo, Molle Molle, Kanarancho, Cuatro Esquinas y Callajchullpa*) and 2 % of the land was offered in the remaining 58 % of the communities<sup>6</sup>

Taking into account the great number of land offers, it can be concluded that the districts 4, 5 and 6 of the municipality have had an important dynamic in the use of land. 89 % of the offer was concentrated in areas ideal for urbanization and only 11 %, in rural areas. However, this phenomenon may be apparent, especially if one considers the case of Tiquipaya (the old town) where 67 % of the land offers was concentrated. It is probable that the majority of those properties did not correspond to that zone because the owners of land offered the land in newspaper ads with the name of the municipality where the land was situated, not specifying the name of the community within this municipality.

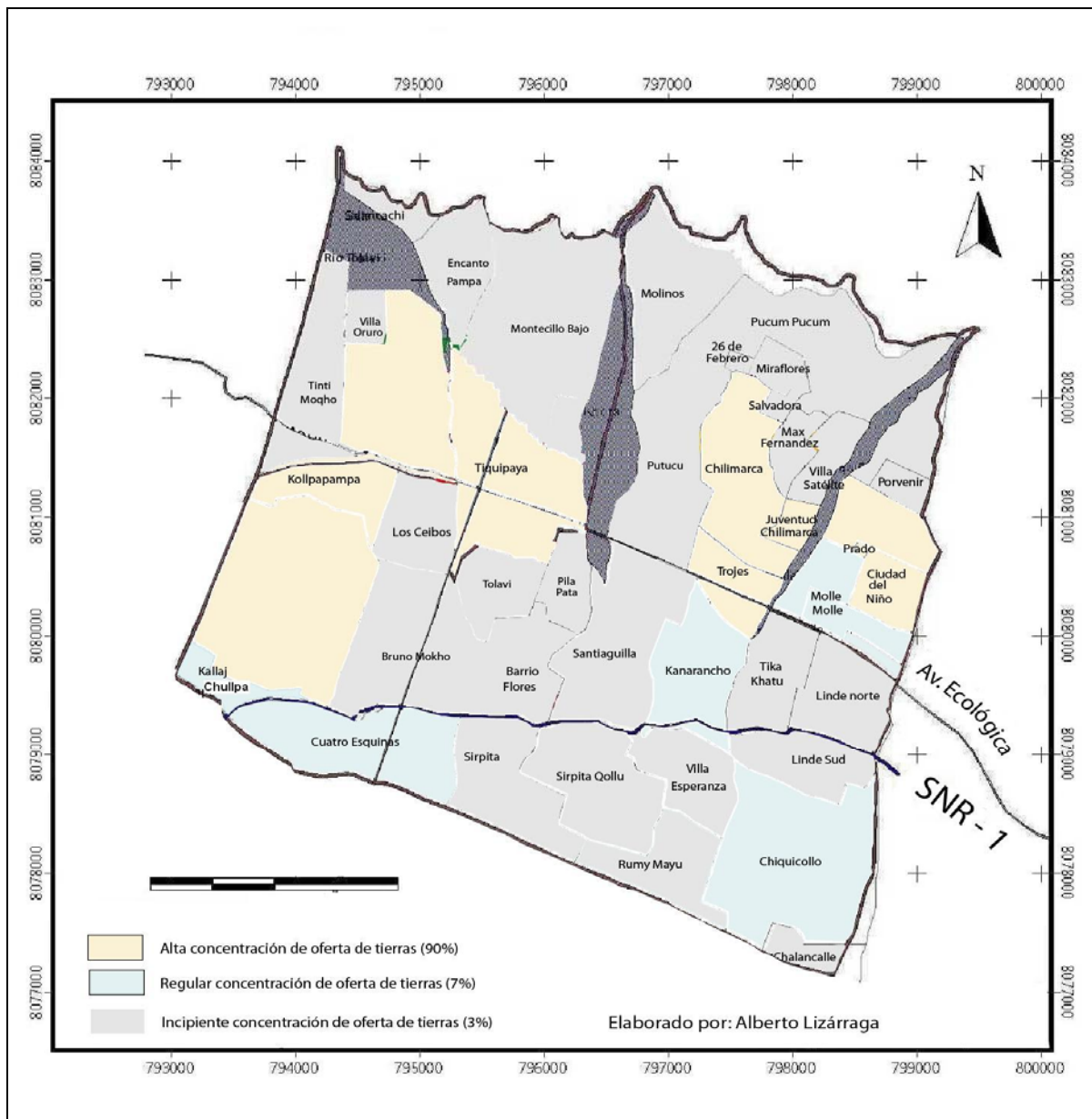
<sup>5</sup> This line was obtained by mean of lineal regression and the function that allows to adjust the variation in the quantity of land offered is:  $Y = 204,86X - 408994.43$ , where X can take the value of the years (1997 – 2003). On the other hand, the number 204.86 means that the quantity of land offers has been increased in that number every year.

<sup>6</sup> These three forms of grouping can be considered as a high, regular and incipient concentration of land offer. The concentration is considered incipient when the land offer in a community has not been higher than 50, regular when the offers are between 50 and 100 plot offers and high when the plot offers are higher than 100.

**Table 4. Frequency of land offer in Tiquipaya, 1997-2003**

<b>Community / Year</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>Total</b>	<b>%</b>
Barrio Flores	0	0	0	0	0	1	1	2	0.04
Callajchullpa	3	10	6	7	18	14	6	64	1.27
Kanarancho	4	10	12	18	13	8	7	72	1.43
Ciudad del Niño	7	9	1	1	12	6	65	101	2.00
Cuatro Esquinas	6	16	16	13	13	5	2	71	1.41
Chilimarca	46	52	51	46	54	20	24	293	5.81
Chiquicollo	3	15	14	12	13	13	15	85	1.69
Encanto pampa	0	1	1	3	0	0	0	5	0.10
Kollpapampa	23	41	32	23	13	11	12	155	3.08
La Violeta	1	0	0	1	0	0	0	2	0.04
Linde	19	7	10	8	49	4	4	101	2.00
Los Molinos	0	0	1	0	0	0	0	1	0.02
Mocotuco	1	0	0	0	0	0	0	1	0.02
Molle Molle	14	16	13	5	14	3	8	73	1.45
Montecillo	8	7	0	6	1	1	3	26	0.52
Pila Pata	0	3	0	0	0	0	0	3	0.06
Putuco	0	0	4	0	0	0	0	4	0.08
Rumy Mayu	1	6	6	6	0	1	3	23	0.46
Santiaguilla	1	0	0	1	2	2	1	7	0.14
Sirpita	3	7	7	6	1	2	4	30	0.60
Tiquipaya	131	212	215	180	520	289	1806	3353	66.54
Tolavi	1	0	1	2	1	1	1	7	0.14
Totorkawa	0	0	0	0	0	1	0	1	0.02
Trojes	66	58	52	58	65	76	180	555	11.01
Villa Esperanza	0	1	0	0	0	2	0	3	0.06
Villa Satélite	0	0	1	0	0	0	0	1	0.02
Total	338	471	443	396	789	460	2142	5039	100.00
Percentage	6.1	9.35	8.79	7.86	15.66	9.13	42.51	100.00	

Source: Own elaboration based on LosTiempos, January 1997 to december 2003.



**Figure 4. Land offer in the municipality of Tiquipaya, 1997–2003**

Source: Own elaboration based on LosTiempos, January 1997 to december 2003.

The concentration of land offer in very few communities prompts to think that it might be related to the size of plots; that is, a higher offer concentration would match up with a smaller size of plots. However, it is very relative and it can be verified in the following table:



**Table 5. Average size of offered plots in Tiquipaya and kind of concentration 1997-2003**

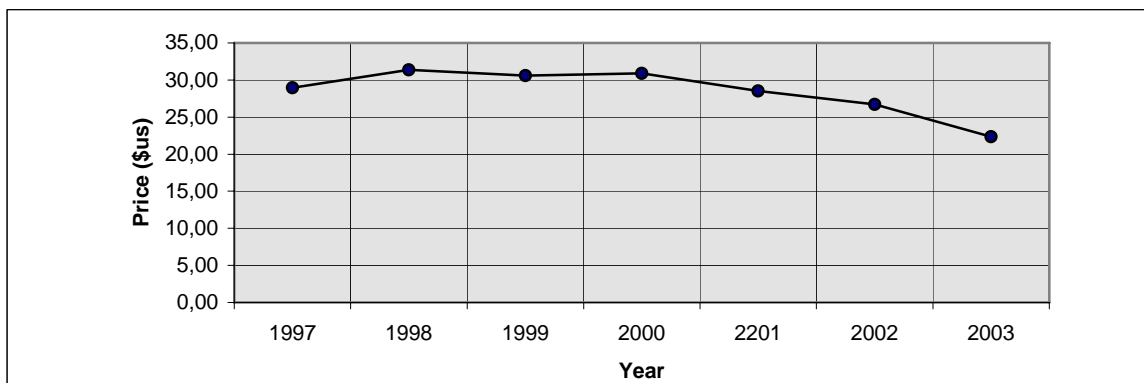
Community	Total land offer	Average size of offered plots in m <sup>2</sup>	Category of concentration
Los Molinos	1	50000.00	Weak
Rumy Mayu	23	7817.55	Weak
La Violeta	2	6753.00	Weak
Sirpita	30	6658.47	Weak
Kollpapampa	155	6075.48	High
Chilimarca	293	4905.61	High
Callajchullpa	64	4609.09	Low
Cuatro Esquinas	71	4086.51	Low
Barrio Flores	2	4077.00	Weak
Chiquicollo	85	3897.69	Low
Santiaguilla	7	3474.50	Weak
Kanarancho	72	3322.29	Low
Trojes	555	3265.19	High
Montecillo	26	3236.80	Weak
Totorkawa	1	3000.00	Weak
Tiquipaya	3353	2979.83	High
Tolavi	7	2557.00	Weak
Putuco	4	2505.11	Weak
Molle Molle	73	2387.96	Low
Pila Pata	3	1767.33	Weak
Mocotuco	1	1300.00	Weak
Linde	101	1131.48	High
Villa Esperanza	3	1100.00	Weak
Encanto Pampa	5	1096.60	Weak
Ciudad del Niño	101	532.41	High
Villa Satellite	1	483.00	Weak
Total	5039	3286.06	

Source: Own elaboration based on LosTiempos, January 1997 to december 2003.

## 2. THE PRICE OF LAND

Figure 5 clearly shows that during the period 1997-2003 the price of land in Tiquipaya had increases and decreases. The top of those price movements had occurred in 1998 when the average price of one m<sup>2</sup> of land reached a value of \$us 31.4, while the lowest price had occurred in 2003 at \$us 22.4 by m<sup>2</sup>. In general, the price of land in Tiquipaya had a decreasing tendency that seemed to be related to the quantity of plots offered, which, along the study period, had increased continuously.

But it is also possible that the decrease in the price can be associated with the maintenance cost of land -payment of taxes and rates arising from property- and the critical uncertainty regarding Bolivia's economic situation that could have made the owners prefer to sell their land.



**Figure 5. Average price of one m<sup>2</sup> of land in the Tiquipaya municipality, 1997-2003**

Source: Own elaboration based on LosTiempos, January 1997 to december 2003.

On the other hand, in Table 6, it can be seen that the land with higher prices is placed in *Linde* and *Molle Molle*, while the land with lowest prices is placed in *Callajchullpa* and “*Ciudad del Niño*”.

**Table 6. Average price of one m<sup>2</sup> of land in Tiquipaya 1997-2003 (in \$us)**

Community	1997	1998	1999	2000	2001	2002	2003
Barrio Flores	—	—	—	—	—	7.00	7.00
Callajchullpa	10.83	9.17	10.70	9.50	9.78	7.72	16.58
Kanarancho	25.82	37.11	28.89	31.76	33.56	32.44	25.20
Ciudad del Niño	20.07	25.38	60.87	15.83	17.26	14.00	10.29
Chilimarca	24.08	23.36	23.39	22.60	23.78	29.17	27.88
Chiquicollo	50.00	39.70	39.94	48.89	31.23	28.22	29.06
Cuatro Esquinas	23.00	17.14	17.03	16.93	13.92	14.00	15.21
Encanto Pampa	—	20.00	17.65	17.65	—	—	—
Kollpapampa	14.16	18.59	20.07	16.70	14.63	16.33	10.23
La Violeta	—	—	—	26.00	—	—	—
Linde	40.77	43.20	49.62	40.79	41.34	38.80	35.76
Los Molinos	—	—	16.00	—	—	—	—
Mocotucu	—	—	—	—	—	—	—
Molle Molle	41.35	55.54	46.81	54.29	42.92	48.60	37.42
Rumy Mayu	13.00	14.00	40.35	14.68	—	18.00	12.00
Santiaguilla	—	—	—	35.00	40.50	20.00	25.00
Sirpita	20.33	19.33	21.90	18.00	—	15.25	14.25
Tiquipaya	28.60	32.63	30.99	31.96	26.84	24.95	22.30
Tolavi	—	—	19.00	23.00	11.00	13.00	26.00
Totorkawa	—	—	—	—	—	—	—
Trojes	33.64	37.53	38.59	39.64	43.21	37.52	26.53
Villa Esperanza	—	—	—	—	—	21.50	—
Villa Satelite	—	—	20.70	—	—	—	—
Annual average	28.94	31.39	30.60	30.91	28.53	26.73	22.36

Source: Own elaboration based on LosTiempos, January 1997 to december 2003.

The highest prices of land in *Linde* and *Molle Molle*, neighbouring communities thriving on the margins of *Ecologica* Avenue, are not casual if one considers that these are adjacent to important neighbourhoods of the Cochabamba city. Furthermore, it is established in the Development Plan of Tiquipaya Municipality that the inhabitants of these zones have their basic service needs covered (SERINCO, 1999:59).

On the other hand, the fact that *Ciudad del Niño* is placed near the margins of the natural risks and ravine area and that *Callajchullpa* does not have basic infrastructure services explains why both communities have had the lowest land prices of the municipality.

It is also worth considering the cases of plots situated in the zones of *Pila Pata* and *Barrio Flores*, whose prices surpassed the limits of the cases mentioned above. For example, the average annual price of one m<sup>2</sup> of land in *Pila Pata* was \$us 50.5 while in Barrio Flores it reached the amount of \$us 7.0 by m<sup>2</sup>. However, those were not considered extreme due to the scarce quantity of plots that were offered in both communities. For example, along the study period just three plots were offered in *Pila Pata* (contrary to 101 and 73 offered in *Linde* and *Molle Molle* respectively), while in *Barrio Flores* just two plots were offered (contrary to the quantity offered in *Callajchullpa* and *Ciudad del Niño*, 64 and 101 respectively).

It can also be mentioned that the highest price at which one m<sup>2</sup> of land was offered was \$us 120 in the community of *Trojes* (offered in Los Tiempos newspaper by the real state Hogar in June 2001), while the highest price of a plot offered in Tiquipaya was \$us 3'010 000 for a plot of 70000 m<sup>2</sup> (offered in August 1999)

### 3. THE SERVICES IN THE OFFERED LAND

An important aspect to mention about the land offer through newspaper is that the ads in spite of giving information about plot placement, area and price, they also refer to the services that the plots have such as: drinking water, electricity, irrigation water and telephone. As it can be noted in the information presented in Table 7, it is possible to state that when a plot has more services its price is higher.

**Table 7. Prices and basic services of offered plots in Tiquipaya 1997–2003 (in \$us.)**

Group	Kind of service that the plot has	Nº of plots	%	Average Price of one m <sup>2</sup>	Nº of plots by group	% by group	Average Price of one m <sup>2</sup> by group
1.	Drinking water	59	1.17	26.76	68	1.35	27.23
	Electricity	2	0.04	31.93			
	Irrigation water	7	0.14	29.90			
2.	Drinking water, electricity	28	0.56	32.01	40	0.79	28.95
	Drinking water, irrigation water	12	0.24	21.83			
3.	Drinking water, electricity, sewage	859	17.05	25.40	879	17.44	25.44
	Drinking water, electricity, telephone	17	0.34	28.16			
	Drinking water, electricity, irrigation water	3	0.06	22.33			
4.	Drinking water, electricity, sewage, irrigation water	2	0.04	25.50	10	0.20	28.54
	Drinking water, electricity, sewage, telephone	8	0.16	29.30			
5.	With services and without price information	101	2.00	—	101	2.00	—
6.	Not known if they have services	3941	78.21	22.36	3941	78.21	22.36
Total		5039	100		5039	100	

Source: Own elaboration based on LosTiempos, January 1997 to December 2003.

In terms of percentage, the most important services that the lands have are drinking water, electricity and sewage. In minor magnitude, there are lands being offered in the market together with a telephone line or indicating that they have irrigation water.

**Table 8. Proportion of plots that had basic services from 5039 plots offered in Tiquipaya (1997-2003)**

Kind of service	Quantity	%
Plots that had drinking water	1087	21.57
Plots that have electricity	995	19.75
Plots that have sewage	920	18.26
Plots that have irrigation water	28	0.56
Plots that have telephone	34	0.67
Plots that do not have any kind of service	3941	78.21

Source: Own elaboration based on LosTiempos, January 1997 to december 2003.

Another way of illustrating the relationship between the access to services and the price of the land is shown in Table 9. This helps verify that the access to services is one element that adds value to the land price although there exist some isolated cases like those of *Ciudad del Niño*, *Chiquicollo* and *Trojes* where the plots that apparently do not have services have higher prices.

**Table 9. Price of offered lands in Tiquipaya in function of the basic services that they have (in \$us), 1997-2003.**

Community	Average price of one m <sup>2</sup> of plots with services*	Average price of one m <sup>2</sup> of plots that do not have information about services *
Barrio Flores	—	7.00
Callajchullpa	9.43	9.08
Kanarancho	31.99	30.37
Ciudad del Niño	10.16	19.94
Cuatro Esquinas	18.16	16.59
Chilimarca	24.56	24.04
Chiquicollo	30.08	36.18
Encanto Pampa	—	18.12
Kollpapampa	18.27	16.64
La Violeta	—	26.00
Linde	53.20	41.22
Los Molinos	—	16.00
Mocotuco	—	—
Molle Molle	47.03	46.13
Montecillo	24.00	17.87
Pila Pata	—	50.33
Putuco	—	33.00
Rumy Mayu	32.07	20.38
Santiaguilla	35.00	27.75
Sirpita	18.50	18.18
Tiquipaya	25.98	24.58
Tolavi	—	18.40
Totorkawa	—	—
Trojes	29.23	37.05
Villa Esperanza	21.50	—
Villa Satélite	—	20.70

Source: Own elaboration based on LosTiempos, January 1997 to december 2003.

\*These prices represent the average of the prices in the period 1997 y 2003

An aspect that should be clear is that a better provision of basic services does not have a direct incidence in the acceleration of the urbanization process. Tiquipaya, with basic services or without them, has suffered a continuous urban expansion. Although basic services are essential, the housing needs, especially of the sectors with lower economic incomes, determine

why those families are concerned first about acquiring plots for the construction of their houses and then about the provision of basic services. For the latter, they adopt different and temporary strategies like: purchase of water from tankers at a first stage and the drilling of wells at a second stage when the establishment is consolidated That is not necessarily related to the planes approval by the municipality but to the time lived by the owners in that place.

#### 4. LAND OFFER AND MINIMUM LIMITS PERMITTED ACCORDING TO ZONES

The dimensions of offered plots are varied from a minimum of 200 m<sup>2</sup> to a maximum of 200000 m<sup>2</sup>. However, the market in general has been characterized by the offer of small plots. Thus, more than 42 % have dimensions that do not overcome 1000 m<sup>2</sup>, 32 % are between 1001 and 10001 m<sup>2</sup>; 3 % are between 10001 and 20000 m<sup>2</sup>, 1 % encompass plots that are over 20001 up to 200000 m<sup>2</sup> ;and finally, 21 % are plots offered without indicating their dimensions.

**Table 10. Quantity of lands offered in Tiquipaya Municipality (intervals expressed in miles of m<sup>2</sup>), 1997–2003.**

Community / surface	Without specifying surface	0–1	1.1–10	10.1–20	20.1–50	50.1–100	100.1–200	Total
Barrio Flores	0	0	2	0	0	0	0	2
Callajchullpa	0	1	59	4	0	0	0	64
Kanarancho	1	10	55	6	0	0	0	72
Ciudad del Niño	0	96	5	0	0	0	0	101
Cuatro Esquinas	2	7	60	1	1	0	0	71
Chilimarca	7	130	111	25	20	0	0	293
Chiquicollo	0	32	47	0	6	0	0	85
Encanto Pampa	0	4	1	0	0	0	0	5
Kollpapampa	0	15	130	6	3	0	1	155
La Violeta	0	0	2	0	0	0	0	2
Linde	0	66	35	0	0	0	0	101
Los Molinos	0	0	0	0	1	0	0	1
Mocotuco	0	0	1	0	0	0	0	1
Molle Molle	5	57	8	2	0	1	0	73
Montecillo	0	2	24	0	0	0	0	26
Pila Pata	0	2	1	0	0	0	0	3
Putuco	0	1	3	0	0	0	0	4
Rumy Mayu	1	0	19	2	0	1	0	23
Santiaguilla	1	0	6	0	0	0	0	7
Sirpita	0	1	22	7	0	0	0	30
Tiquipaya	919	1615	682	98	23	11	5	3353
Tolavi	1	1	5	0	0	0	0	7
Totorkawa	0	0	1	0	0	0	0	1
Trojes	115	109	314	15	2	0	0	555
Villa Esperanza	0	2	1	0	0	0	0	3
Villa Satelite	0	0	1	0	0	0	0	1
Total	1052	2151	1595	166	56	13	6	5039
Porcentaje	20.8	42.69	31.65	3.29	1.11	0.26	0.12	100.00

Source: Own elaboration based on LosTiempos, January 1997 to december 2003

On the other hand, considering the average surface of plots offered during the study period, the results of the research show that between 1997 and 2000 the average size of offered plots

was 5000 m<sup>2</sup> approximately. On the contrary, this average was under 2500 m<sup>2</sup> during the following years.

By establishing surface limits by zone and by making reference to the averages, it is possible to know if the municipal norms referred to the size of land have been accomplished. Although, in most cases, it is not specified if plots offered in the newspaper were all or just part of an existing plot, from the analyses of several publications, it was possible to determine that there existed important quantities of land offered by smaller pieces during the last years and by the real state “*Hogar*” and “*Recoleta*” and by the owners in zones like *Chilimarca*, *Trojes*, *Linde* and *Ciudad del Niño*. This induced to think that a large proportion of plots in other zones could be offered in the same way as a strategy to make more profit.

In that sense, the results presented on Table 11 show that the land in rural areas was the most affected because it was fractioned under the allowed limits, giving space to the arising of new urbanizations and to the losing of the municipality’s agricultural vocation.

**Table 11. Lower limit of the plots of Tiquipaya according to the location of the zones and the average size of the offered lands, 1997-2003**

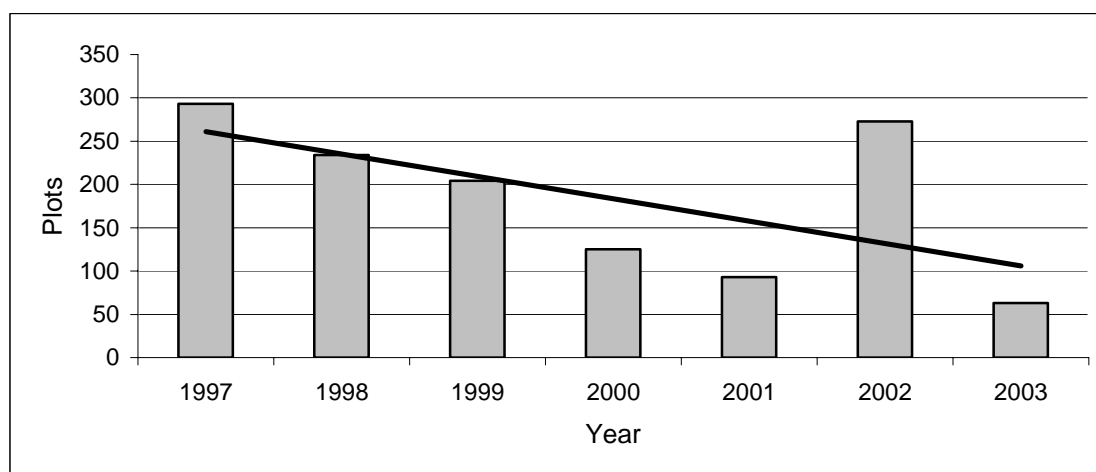
Community	Zone according to the managing Plan of 1997	Limit permitted in m <sup>2</sup>	Average size of the plots offered in m <sup>2</sup>	According to the norm
Barrio Flores	Agricultural	5000	4077.00	No
Callajchullpa	Out of the study area	—	4609.09	—
Kanarancho	Out of the study area	—	3322.29	—
Ciudad del Niño	High density	250	532.41	Sí
Cuatro Esquinas	Out of the study area	—	4086.51	—
Chilimarca	Urban regulation	500	4905.61	Sí
Chiquicollo	Out of the study area	—	3897.69	—
Encanto Pampa	Agricultural	5000	1096.6	No
Kollpapampa	Out of the study area	—	6075.48	—
La Violeta	Out of the study area	—	6753	—
Linde	High density	250	1131.48	Sí
Los Molinos	Agricultural	5000	50000	Sí
Moco Tuco	Out of the study area	—	1300	—
Molle Molle	High density	250	2387.96	Sí
Montecillo	Agricultural	5000	3236.80	No
Pila Pata	Agricultural	5000	1767.33	No
Patuco	Agricultural	5000	2505.11	No
Rumy Mayu	Out of the study area	—	7817.55	—
Santiaguilla	Out of the study area	—	3474.5	—
Sirpita	Out of the study area	—	6658.47	—
Tolavi	Agricultural	5000	2979.83	No
Totorkawa	Out of the study area	—	2557	—
Trojes	Urban regulation	500	3000	Sí
Villa Esperanza	Out of the study area	—	3265.19	—
Villa Satellite	Urban regulation	500	1100	No

Source: Own elaboration based on LosTiempos, January 1997 to december 2003. Municipal technical records of land use, January 1997 December 2003, Municipality of Tiquipaya.

As it was mentioned before, the surface of plots were expressed in square meters because the metric system is commonly utilized in newspaper ads. Exceptionally, ads were found in which the plot surface was expressed in hectares. For the rest, measure terms like the *arrozada*, *fanega* and others that are still utilized in transactional documents were not found.

### PART THREE: LAND SALES CONCRETED AND REGISTERED

The quantity of land transferred between 1997 and 2003 out of the high density area –better known as the old town of Tiquipaya- and registered in the files of Urban and Rural Cadastre of Tiquipaya Municipality reached a total of 1285 cases. As it can be seen on Figure 6, from 1997, year with the highest frequency, the transfers declined systematically up to 2002, year in which they increased. However, the next year a high decrease occurred reaching its minimum level equivalent to 4 % of the total transfers carried out during the seven years. In general terms, the straight line of Figure 6 indicates that there was a decreasing tendency in land transfers. This allows to state that the land market has been losing its dynamic with reference to its demand component.



**Figura 6. Transfers of land in Tiquipaya municipality, 1997-2003**

Source: Own elaboration based on transfer minutes, January 1997 december 2003, Municipality of Tiquipaya.

Referring to the spatial distribution, the 1285 land transfers have been carried out in 30 communities. 56 % of the total corresponded to the area allowed for urban occupation and 44 % to the area allowed for agriculture. On the other hand, 40 % of the sales were concentrated in only two communities: *Chillimarca* and *Linde*; 34 %, in other five: *Kanarancho*, *Chiquicollo*, *Kollpapampa*, *Urbanización Satelite* and *Villa Porvenir*; and 26 %, in the rest of the communities<sup>7</sup>

<sup>7</sup> These three forms of grouping can be considered as a high, regular and incipient concentration of land demand. The criteria adopted here is similar to the one adopted in the land offer theme (See footnote N° 7).

**Table 12. Frequency of land transfers in Tiquipaya, 1997-2003.**

Community / Year	1997	1998	1999	2000	2001	2002	2003	Total	%
Bruno Mocko	0	2	0	3	1	4	0	10	0.78
Callajchullpa	1	0	0	1	0	0	1	3	0.23
Kanarancho	13	15	8	9	6	13	5	69	5.37
Ciudad del Niño	13	15	8	2	0	4	1	43	3.35
Cuatro Esquinas	3	4	2	0	1	4	0	14	1.09
Chalancalle	0	9	0	1	0	0	0	10	0.78
Chilimarca	47	41	62	48	36	147	24	405	31.52
Chiquicollo	18	14	21	13	7	15	2	90	7.00
Encanto Pampa	3	0	2	1	0	0	1	7	0.54
Kollpapampa	11	19	25	11	8	19	5	98	7.63
La Violeta	2	1	1	0	1	0	0	5	0.39
Linde	10	25	18	8	13	27	4	105	8.17
Molle Molle	7	14	9	7	2	5	0	44	3.42
Montecillo	7	11	5	4	4	9	1	41	3.19
Prado	1	0	0	0	0	0	0	1	0.08
Pila Pata	0	0	10	2	4	0	2	18	1.40
Pucun Pucun	0	0	0	0	0	1	0	1	0.08
Putucu	8	9	4	4	3	4	0	32	2.49
Rumy Mayu	2	1	0	0	1	3	1	8	0.62
Santiaguilla	5	1	4	2	1	1	2	16	1.25
Sirpita	5	4	3	1	1	4	2	20	1.56
Sirpita Kollu	0	3	5	5	0	2	2	17	1.32
Tinti Mocko	0	0	1	0	0	1	1	3	0.23
Trojes	4	1	4	1	1	1	1	13	1.01
Urb. Juventud Chilimarca	1	0	0	0	0	0	0	1	0.08
Urbanizacion la Salvadora	2	0	1	0	0	0	0	3	0.23
Urbanizacion Miraflores	1	1	0	0	0	0	1	3	0.23
Urbanizacion Satelite	68	21	1	0	0	0	0	90	7.00
Villa Esperanza	5	2	5	2	1	7	3	25	1.95
Villa Porvenir	56	21	5	0	2	2	4	90	7.00
Total	293	234	204	125	93	273	63	1285	100.00
Percentage	22.80	18.21	15.88	9.73	7.24	21.25	4.90	100.00	

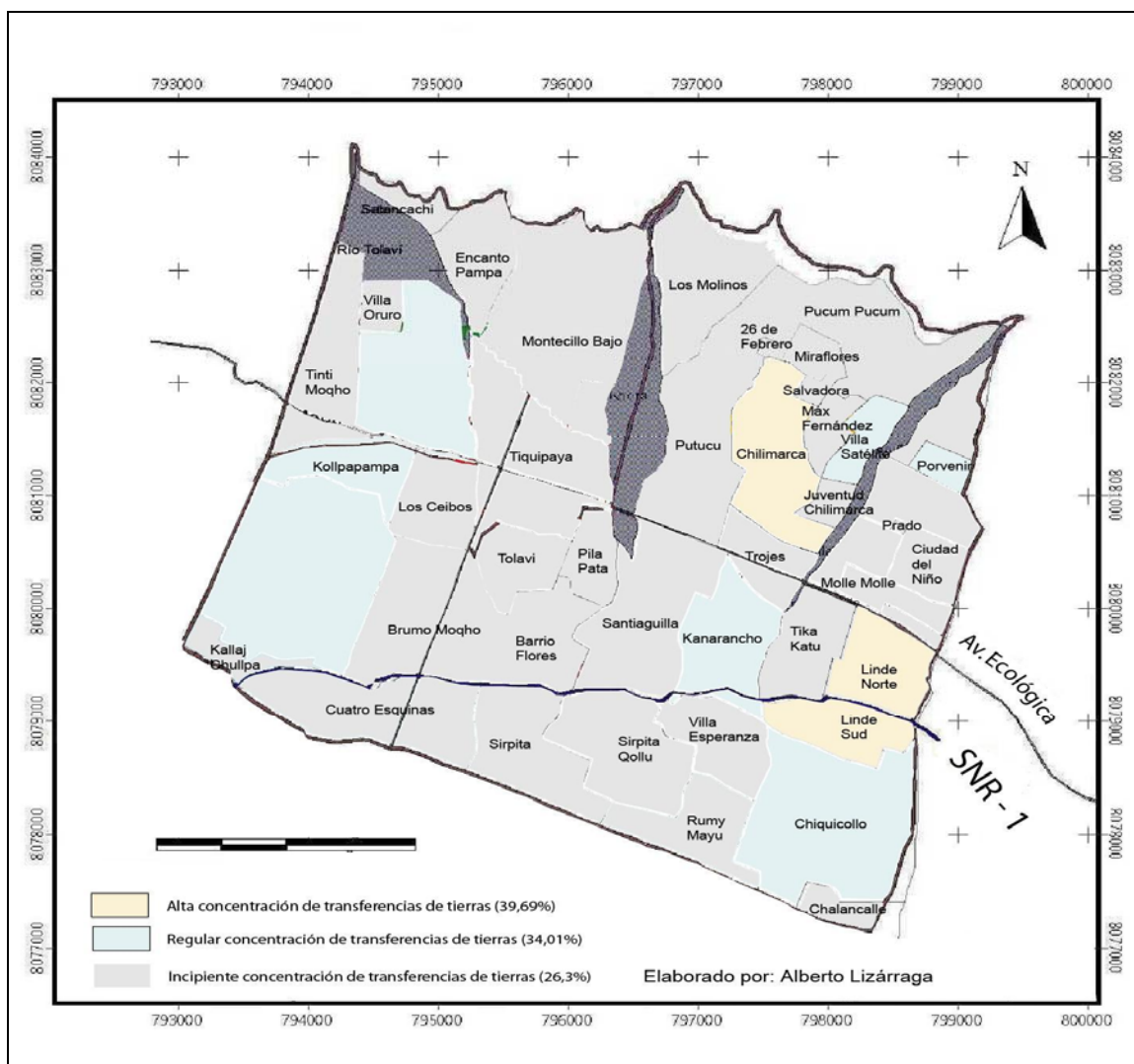
Source: Own elaboration based on transfer minutes, January 1997 december 2003, Municipality of Tiquipaya.

Within the area allowed for urbanization, the majority of transfers were carried out in *Chilimarca*, *Linde*, *Urbanización Satelite* and *Villa Porvenir* while in the rural sector the most important quantities of transfers took place in *Kollpapampa*, *Chiquicollo*, *Kanarancho*, *Montecillo* and *Putucu*.

If the land market is discriminated, taking into account the limits of the study area of the Managing Plan of 1997, 70 % of the lands transferred was inside that area and 30 %, was out. It should be remembered that land incorporated inside the limits of study area was classified as: allowed for urbanization and not allowed for urbanization while, according to the technical



records of the municipality, the land situated out of the said limits was classified as agricultural land.



**Figura 7. Transfers of land in Tiquipaya municipality, 1997–2003**

Source: Own elaboration based on transfer minutes, January 1997 december 2003, Municipality of Tiquipaya.

Finally, as it is observed on Table 13, the land transfers can be classified into two large groups: one of monetary nature and the other of non- monetary nature. The effective sales, which are the most, match up with the first while donation, advances, division and separation of plots and swap correspond to the second<sup>8</sup>. This second group was incorporated as part of the land market mainly because the transfers meant a change of owner or because, in some way, the market operations had a value expression considering, for example, the swap, which is an exchange between equivalents without money in the transaction.

<sup>8</sup> The obtained data does not consign any information of other ways of access like spontaneous establishments and the land endowment by the State.

**Table 13. Types of land transfers in Tiquipaya, 1997–2003.**

Type of transfer	Quantity	%
Award	96	7.47
Legitimate advance	23	1.79
Sale and purchase	1108	86.23
Sale and purchase with bank loan	4	0.31
Sale and purchase with mutual loan	1	0.08
Sale and purchase in public auction	1	0.08
Rights statement	1	0.08
Division and partition	46	3.58
Gift	3	0.23
Exchange	2	0.16
Total	1285	100.00

Source: Own elaboration based on transfer minutes, January 1997 december 2003, Municipality of Tiquipaya.

In relation to the form of transfers where the mediation of money exists, little can be said about the conduct of their prices because, during the process of sale and purchase, a generalized practice had been established, that of making a parts agreement to elaborate transfer minutes with false prices with the aim of evading the payment of high taxes

In spite of the former, amid municipal documentation, a tiny three percent of minutes were found where the real price of the plot was consigned. It was interesting to see that many of these minutes corresponded to well-known families of politicians from the municipality of Tiquipaya, the department of Cochabamba and the country.

## **1. LAND USE IN THE PLOTS**

As Table 14 clearly shows, the communities included in the study area of the Managing Plan 1997 have defined kinds of land use. Actually, more than one community with an already - defined area for the use of land, have other uses, too. That was the case of *Chilimarca* that according to the Managing Plan it was a zone allowed for urbanization. However, in the municipal technical records this land was classified as agricultural; others, as areas of high priority for urban expansion, there was land for urban regulation too and finally there was land for urban transition. That meant that in this community, different from most of the other communities, the land was used in four ways.

Likewise, from the study of the technical records, it was possible to notice that the classification of a plot either as fit for agriculture or for urbanization depends on its size. In this way, taking again the example of *Chilimarca*, in this community one plot of an area equal or higher than 5000 m<sup>2</sup> and without any construction was considered as an agricultural plot according to a technical report of the municipality.

**Table 14. Land use types in Tiquipaya according to the municipal technical records, 1997-2003.**

Community	Total transferred plots	Have municipal technical record		Types of land uses that have technical record				Type of land use according to the Managing Plan of 1997
		No	Yes	Not allowed for Urbanization	Allowed for Urbanization			
				Agricultural	High-priority urban expansion	Urban regulation	Urban transition	
Bruno Moqo	10	0	10	10	0	0	0	Out of the study area
Callajchullpa	3	0	3	3	0	0	0	Out of the study area
Kanarancho	69	8	61	47	5	3	6	Out of the study area
Ciudad del Niño	43	5	38	0	33	5	0	Allowed for urbanization
Cuatro Esquinas	14	0	14	14	0	0	0	Out of the study area
Chalancalle	10	0	10	10	0	0	0	Out of the study area
Chilimarca	405	59	346	37	206	75	28	Allowed for urbanization
Chiquicollo	90	7	83	82	1	0	0	Out of the study area
Encanto Pampa	7	0	7	6	0	1	0	Not allowed for urbanization
Kollpapampa	98	30	68	62	1	5	0	Out of the study area
La Violeta	5	1	4	4	0	0	0	Out of the study area
Linde	105	6	99	59	24	16	0	Allowed for urbanization only in
Molle Molle	44	8	36	0	33	3	0	Allowed for urbanization
Montecillo	41	10	31	27	1	1	2	Allowed for urbanization
Prado	1	0	1	0	1	0	0	Allowed for urbanization
Pila Pata	18	4	14	13	0	1	0	Not allowed for urbanization
Pucun Pucun	1	0	1	0	1	0	0	Not allowed for urbanization
Putucu	32	1	31	30	0	1	0	Not allowed for urbanization
Rumy Mayu	8	1	7	7	0	0	0	Out of the study area
Santiaguilla	16	2	14	14	0	0	0	Out of the study area
Sirpita	20	1	19	19	0	0	0	Out of the study area
Sirpita Kollu	17	5	12	12	0	0	0	Out of the study area
Tinti Mocko	3	0	3	3	0	0	0	Out of the study area
Trojes	13	6	7	3	0	4	0	Allowed for urbanization
Urb. Juventud Chilimarca	1	0	1	0	0	1	0	Allowed for urbanization
Urbanizacion La Salvadora	3	0	3	0	0	3	0	Allowed for urbanization
Urbanizacion Miraflores	3	0	3	0	0	3	0	Allowed for urbanization
Urbanizacion Satelite	90	1	89	0	2	87	0	Allowed for urbanization
Villa Esperanza	25	2	23	23	0	0	0	Out of the study area
Villa Porvenir	90	37	53	0	32	21	0	Allowed for urbanization
Total	1285	194	1091	485	340	230	36	
Percentage	100	15.1	84.9					
% of plots in function the ones that have technical records				44.45	31.16	21.08	3.30	
				44.45		55.55		

Source: Own elaboration based on transfer minutes, January 1997 december 2003, Municipality of Tiquipaya.

Situations have been seen in which, the fractioning of land in agricultural zones or the use of lands situated in risky zones, with the pace of time, the municipality has been forced to change the treatment of land use by going against the legal norms and correcting the mistake through the settlement of another norm “By exception”; a very curious situation because by making the revision of municipal ordinances and resolutions many similar cases were found. As examples of those administrative acts there is the Resolution N° 35 of 30<sup>th</sup> (August, 2000) and the municipal Ordinance N° 8 of 15<sup>th</sup> (June, 2001), which content is as follow:

[...] CONSIDERING

That the Article 126 of the Municipality Law orders to the Municipal Government to elaborate and execute policies, plans, projects and strategies for the urban development. That the execution of the residence group *Eucaliptos* will guarantee the jurisdictional limits. That, furthermore, this urbanization is located in the area of urban expansion.

RESOLUTION

By this exclusive and unique time it is authorized the Executive Body to change the land use in the area compound by 50 m to the North and to the South of the main road of access to Chiquicollo between the current limit and the Taquiña Stream [natural risk area] (Tiquipaya Municipality, 2000)

CONSIDERING

That from the report of the Urbanism Department of date 11<sup>th</sup> of June 2000 it comes off that (...) the former year Mr. (...) presented a request of land use change and a preliminary design of construction of a closed condominium in his property, located in the zone of *Putucu* considered of agricultural use.

ORDINANCE

It is authorized the Executive Body to exceptionally, Change Land Use in the property of Mrs. (...) with charge to modification in the new “Managing Plan”

Both, the example of Resolution and Ordinance are more useful to explain how Municipal Government acts have constituted a factor that has contributed to the inappropriate use of land and to the disordered urbanization process.

## 2. LAND TRANSFERS AND LIMITS

As can be seen from Table 15, 68 % of the plots that were transferred have less than 1000m<sup>2</sup>. About 31 % are plots with a dimension between 1000 and 10000 m<sup>2</sup> and less than 2% are plots with dimensions that surpass 10000 m<sup>2</sup> but do not reach 45000 m<sup>2</sup>. Thus the market was characterized by the trade of small plots as much as by the concentration of the transfers in areas allowed for urbanization, especially in *Chilimarca* and with less frequency in *Villa Porvenir* and the *Urbanizacion Satelite*. In the three cases the land sales were controlled mainly by associative groups. Thus, in the *Urbanizacion Satelite*, the neighbors’ organization *Villa Satelite* became their sales officer while in *Villa Porvenir*, sales were in charge of the association of engineers and geologists of YPFB<sup>9</sup> through its Director’s Board. Finally, in *Chilimarca* the transfers were the responsibility of the housing cooperative *Ciudad del Niño Ltda.*

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<sup>9</sup> YPFB is the petrol company of the Bolivian State

**Table 15. Quantity of plots transferred in Tiquipaya municipality (Intervals expressed in thousands of m<sup>2</sup>), 1997–2003.**

<b>Community / Surface interval</b>	<b>0 – 1</b>	<b>1.1–10</b>	<b>10.1-20</b>	<b>20.1-30</b>	<b>30.1-40</b>	<b>40.1-50</b>	<b>Total</b>
Bruno Mocko	1	9	0	0	0	0	10
Callajchullpa	2	1	0	0	0	0	3
Kanarancho	48	21	0	0	0	0	69
Ciudad del Niño	42	1	0	0	0	0	43
Cuatro Esquinas	2	10	2	0	0	0	14
Chalancale	10	0	0	0	0	0	10
Chilimarca	327	76	1	0	1	0	405
Chiquicollo	53	37	0	0	0	0	90
Encanto Pampa	2	4	1	0	0	0	7
Kollpapampa	26	68	2	1	1	0	98
La Violeta	0	5	0	0	0	0	5
Linde	74	31	0	0	0	0	105
Molle Molle	39	5	0	0	0	0	44
Montecillo	16	25	0	0	0	0	41
Pila Pata	9	8	0	0	1	0	18
Prado	1	0	0	0	0	0	1
Pucun Pucun	1	0	0	0	0	0	1
Putucu	6	25	1	0	0	0	32
Rumy Mayu	1	6	1	0	0	0	8
Santiaguilla	3	11	0	1	0	1	16
Sirpita	2	18	0	0	0	0	20
Sirpita Kollu	3	12	2	0	0	0	17
Tinti Mocko	0	3	0	0	0	0	3
Trojes	7	6	0	0	0	0	13
Urb. Juventud Chilimarca	1	0	0	0	0	0	1
Urbanizacion La Salvadora	3	0	0	0	0	0	3
Urbanizacion Miraflores	3	0	0	0	0	0	3
Urbanizacion Satélite	89	1	0	0	0	0	90
Villa Esperanza	7	18	0	0	0	0	25
Villa Porvenir	90	0	0	0	0	0	90
<b>Total</b>	<b>868</b>	<b>401</b>	<b>10</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>1285</b>
Percentage	67.55	31.21	0.78	0.16	0.23	0.08	100.00

Source: Own elaboration based on transfer minutes, January 1997 december 2003, Municipality of Tiquipaya.

From the data analyses it was determined that 2 % of the plots were transferred in a fractioned way. In general terms, the results on Table 16 show that in the majority of the zones defined

by the Managing Plan of 1997, the municipal norms about the minimum size that plots should have, were not respected. Obviously, the consequences of these divisions under the established limits are more disastrous in agricultural areas than in sectors allowed for urbanization since smaller plots can hardly be sustained. Thus, giving space to changes in land use.

**Table 16. Minimum limit of plots in Tiquipaya according to the location of the zone and the average size of transferred plots, 1997-2003**

Community	Zone according to the Managing Plan of 1997	Minimum limit allowed in m <sup>2</sup>	Averages size of transferred plots in m <sup>2</sup>	According to the norm?
Bruno Mocko	Out of the study area	5.000	2239.56	No
Callajchullpa	Out of the study area	5000	795.91	No
Kanarancho	Out of the study area	5000	969.67	No
Ciudad del Niño	High-priority urban expansion	250	539.71	Yes
Cuatro Esquinas	Out of the study area	5000	3149.52	No
Chalancalle	Out of the study area	5000	311.87	No
Chilimarca	High-priority urban expansion	500	955.36	Yes
Chiquicollo	Out of the study area	5000	1330.64	No
Encanto pampa	Agricultural	5000	5135.42	No
Kollpapampa	Out of the study area	5000	3124.13	No
La Violeta	Out of the study area	5000	2131.29	No
Linde	High-priority urban expansion (North Linde)	250	893.71	Yes
	Out of the study area (South Linde)	5000	878.47	No
Molle Molle	High-priority urban expansion	250	613.80	Yes
Montecillo	Agricultural	5000	2072.05	No
Pila Pata	Agricultural	5000	3244.02	No
Prado	High-priority urban expansion	350	478.00	Yes
Pucun Pucun	Agricultural	5000	263.00	No
Putuco	Agricultural	5000	2939.24	No
Rumy Mayu	Out of the study area	5000	4419.23	No
Santiaguilla	Out of the study area	5000	6670.42	Yes
Sirpita	Out of the study area	5000	3035.83	No
Sirpita Kollu	Out of the study area	5000	4373.25	No
Tinti Moko	Out of the study area	5000	1160.25	No
Trojes	Urban regulation	500	1576.81	Yes
Urb. Juventud Chilimarca	Urban regulation	500	500.00	Yes
Urbanizacion La Salvadora	Urban regulation	700	512.38	No
Urbanizacion Miraflores	Urban regulation	700	375.00	No
Urbanizacion Villa Satélite	Urban regulation	700	502.61	No
Villa Esperanza	Out of the study area	5000	1678.21	No
Villa Porvenir	High-priority urban expansion	350	484.90	Yes

Source: Own elaboration based on transfer minutes and land use technical records, January 1997 december 2003, Municipality of Tiquipaya.

But these changes in land use are not determined by the division of lands solely, it has a lot to do with the arrival of people from other parts of the country whose former activities were related, for example, to mining or trading. With the exception of the mining activity, the other activities were reproduced in the new habitat.

Likewise, the high classes of the city made their inroad into agricultural lands, where they built mansions or luxurious departments with orchards and big gardens. Agents, who were around, have propitiated the modification of uses.

But it was also manifest that the Tiquipaya Municipality took an important role in the land use changes. On Table 17, additional elements that corroborate this statement are presented. It can be seen that between 1997 and 2003 there existed very few processes of house plane approvals in the rural sector, but contrary to it, there is a major quantity of processes of planes approval that are the initial steps toward the approval of construction planes.

On the other hand, the fact that another considerable number of processes of regularization is registered is a symptomatic example of the municipality acquiescence to the land use change from agricultural to urban use. The regularization in spite of the ordering of the condition of a plot in relation to the establishment of its real dimensions, with or without prejudice that imply a cession of part of the property for green areas or public roads, considers also the delimitation of lines which is a technical resource that is applied regularly in urban areas. Although the delimitation of lines is applied also in rural areas for the delimitation and/or construction of a local road, the fact that there exist a considerable number of plane approvals leads us to conclude that there is a close dependence between this technical resource and the regularization norm. Not other thing was done with the change of land use.

**Table 17. Procedures of owners of land in front of the municipality of Tiquipaya, 1997–2003**

Kind of procedure	Zone			Total
	Not specified	Allowed for urbanization	Not allowed for urbanization	
Annexation	0	3	0	3
Build approval	0	1	0	1
Residence plane approval	0	8	3	11
Urbanization approval	0	1	0	1
Change of name	0	127	27	154
Change of name and annexation	0	1	0	1
Change of name and residence plane approval	0	3	6	9
Division of plot	0	3	0	3
Rectification of name	0	1	0	1
Rectification of residence plane approval	0	0	1	1
Regularization	48	297	276	621
Regularization and annexation	0	2	10	12
Regularization and endorse	0	15	19	34
Regularization, annexation and endorse	0	0	1	1
Endorse	147	143	142	432
Total	195	605	485	1285

Source: Own elaboration based on land use technical records, January 1997 december 2003, Municipality of Tiquipaya.

## **PART FOUR: THE IMPORTANCE OF THE REAL STATE COMPANIES IN THE LAND MARKET**

The real state companies, also called Property Goods Houses, are commercial organizations that have the function to intermediate in the process of sale and purchase of all kinds of property goods. In Bolivia, their actions are regulated by the Trade Code and for their operation it is necessary to have the Number of Tributary Identification (NIT by its abbreviation in Spanish) at Internal Taxes. Like any commercial institution the real state companies are subject to the payment of taxes for all the marketing operations that they may carry out.

The customers of the real state companies can be sorted to two kinds: On the one hand, there are those who want to sell their land and on the other, those who want to buy. One of the most usual forms is to know both clients, especially in the local environment, or through the newspaper. Although there are other media like the radio or the internet, real state does not go much to the latter because that implies some difficulties for their clients. For example, the radio. The person who is interested in the sale and purchase of land has to know the radio station that gives that kind of information and be aware of the emission schedule. The internet requires certain knowledge about its handling and its use is restricted to sectors with higher educative level. On the other hand, in the newspaper, if the persons have the option to review even the past ads, it is enough for them to go to some library.

It is pertinent to stress that many real states that offer their services through the newspaper give only their telephone number and not their name. One of the reasons for this form of operation is probably the illegality of their constitution.

But behind the ads where only the telephone number is given there are two other agents of the land market: the land owners and the “*loteadores*”<sup>10</sup>. The latter are characterized by the appropriation and selling of land in a fraudulent manner.

### **1. ADVANTAGES THAT THE REAL STATE OFFER TO THEIR CLIENTS**

The importance of the real state resides in the fact that they become the agents that mobilize the land market. But, what makes many people to appeal to these institutions looking for their services?

In the case of the land purchasers the reasons are the following:

- *Time*: The client cannot look for a plot on his own and request that work to a real state. The client also goes to the real state when he has been informed that a mentioned institution is offering some plot of his interest.
- *Cost of the searching*: The client does not pay for the searching service on the plot that he is interested in obtaining.

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<sup>10</sup> People who make profit by buying large plots and selling them by smaller pieces



- *Characteristics of the plot:* Associated to the former reason, the customer can ask the real state to search a plot with some characteristics of his/her interest.
- *Fixation of budget top:* The client can request the real state to get him/her a plot according to his/her economic capabilities.
- *Visiting the plot:* The real state takes the purchaser to the place where the plot is located. In that case the customer only covers the transportation costs and nothing else.
- In the same way, the purchaser can also give confidence to the real state to verify if the plot, object of transaction, has a default in the payment of taxes, if it is registered or if it is mortgaged.

Besides, the persons who want to sell their land request the service of a real state because of the following reasons:

- *Permanent clientele:* The real state is almost always related to the persons that want to buy or sell their land.
- *Cost of offering:* The real state covers the total cost of the publications without charging the owner of the plot. If, by any chance, the plot is not sold, the owner does not cover the costs of the publications.
- *Visiting the site:* It is not necessary that the owner lead the purchaser to the place where the property is located, the personnel of the real state is in charge of it. In that case the one who is interested in acquiring the land covers the transportation costs.

Once those instances parties are settle down the real state companies receive between 1.5 and 5 % of the value of the transaction. Although there are situations in which the owner of the plot fixes a minimum price and leaves the decision of selling the plot to the real state in any other price above this minimum. That difference can become or not an additional payment over the percentage agreed upon parties. The rule is that by the amounts that the real state receives, it should issue an invoice. But it is not always the case due to the logic of tax evasion (partial or severe) that there is among the three agents of the market: the owner of the plot, the real state agency and the purchaser, advised by a lawyer that, in some cases, happens to be another employee of the real state.

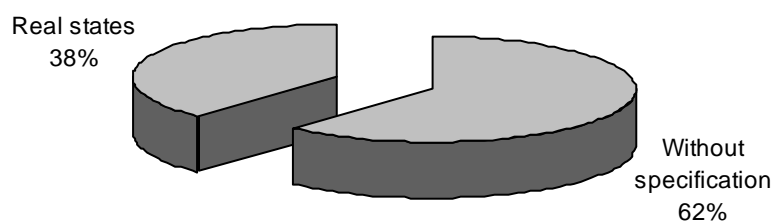
Moreover, the experience and knowledge of the land market and especially of the fluctuations of prices has determined that the real state becomes an organization devoted to the accumulation of all kinds of land, which is acquired at low prices to afterwards be sold at higher prices.

Although the real state must have an account of all the sale and purchase operations, specified by the Trade Code, the access to the said documentation happens to be difficult, especially for an academic study intending to show some facets of their activities. This attitude is understandable, taking into account that real states are private institutions and accordingly, they will hardly make known to the public, the ways how they administer and operate.

## 2. PARTICIPATION IN THE TIQUIPAYA LANDS MARKET

As it was mentioned before, the quantity of plots that were offered through the newspaper from 1997 to 2003 was of 5039 units, out of which 38 % was offered by different real state of the city of Cochabamba (an area of 8'681 813 m<sup>2</sup> approximately) while 62 % does not have the identification of the person who offered the plot. It is possible, as was pointed out before, that this group would be encompassed by real state having a weak legal situation, by owners of the land and by the *loteadores*.

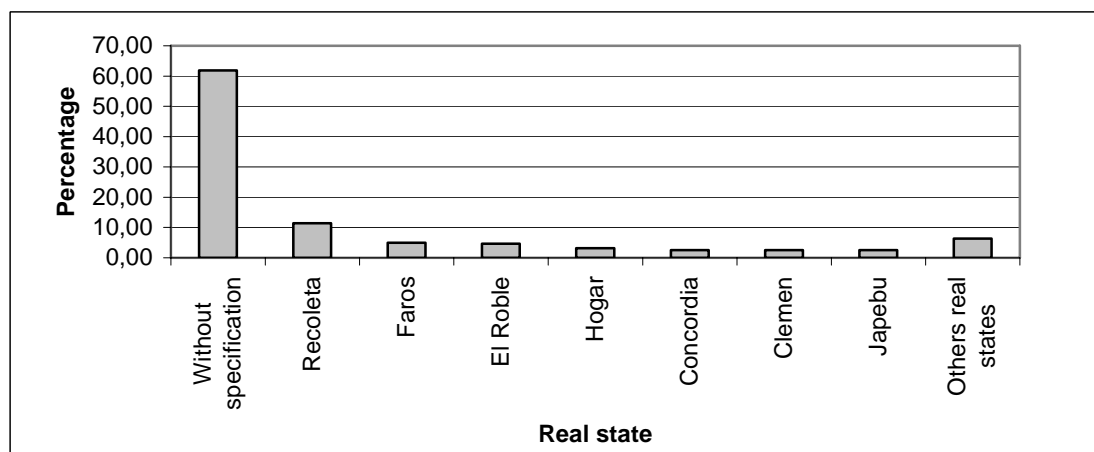
If the former group had been compounded by real state with legal problems and by the *loteadores*, the plots offered by them would have been characterized by the illegality during those years, in the land market in Tiquipaya.



**Figura 8. Land offer in Tiquipaya according to the kind of agent, 1997-2003**

Source: Own elaboration based on Los Tiempos, January 1997 december 2003

Despite these slips of illegality in the land market in Tiquipaya: this situation would have been prosperous for the 41 real states that participated. From these, depending on the quantity of plots offered, *Recoleta*, *Faros* and *El Roble* can be considered as the most important because they represent only 7 % of the real state, however, they concentrate 22 % of the total offer of plots. If one considers only the offer within the real state environment without taking into account the offers carried out by agents that did not identify themselves, the three real states concentrated 55 % of the land offers in Tiquipaya.



**Figura 9. Participation of real state companies on land offer in Tiquipaya, 1997-2003**

Source: Own elaboration based on Los Tiempos, January 1997 december 2003

Finally, by considering that the real state obtained between 2 % and 5 % of the value of each plot, and by knowing that the average price of land during the period 1997 – 2003 was \$us 33.2 by m<sup>2</sup> and by assuming that all the offered plots were sold, it is estimated that the real state as a whole obtained profits that fluctuate between \$us 2'884 966 and \$us 14'424 832 by the selling of 8' 681 813 m<sup>2</sup> of land. That means that in average each one of the 41 real states obtained between \$us 70365.0 and \$us 351825.2 respectively. These are quite considerable amounts but small compared to the total amounts of the transactions that may have occurred in the land market of Tiquipaya as a whole, which is calculated as high as \$us 550'237 015 by the sale of 16'558 442 m<sup>2</sup> of land.

## CONCLUSIONS

A Managing Plan for the utilization of space aims, at least, to achieve three large objectives: to give direction and help the municipality improve its action, to coordinate and guide the actions of the public organizations in the territory and to regulate the actions of private sectors. In the case of Tiquipaya these three objectives are far from being achieved or, at least, partially due to the faulty application of the technical and normative aspects contained in the three managing plans. This is a result not only of the faulty management of municipal authorities, but also of their lack of legitimacy. None of them reflects agreements between social sectors and local government in relation to the urban and rural development in a temporary horizon. This has impeded the establishment of a “should be”; that means a shared imaginary regarding the future of the municipality.

The Managing Plans have not shown any efficacy especially related to the preservation of agricultural areas –main goal for what they were elaborated- since the plots placed in those zones have been fractioned below the allowed limits or were occupied by diverse sectors of the population for different reasons, damaging the agricultural production. In sectors allowed for urbanization, the problem also occurs because of the transgression of norms not only about the size of plots but also about the fixing of lines and other procedures with the acquiescence of authorities and municipal officials.

In this context, it is not possible to think about an arbitrary and unilateral decision making about the way of occupation and use of land. The standing nationwide legislation related to this theme forces the participation and agreement of the actors involved in the definition of objectives and implementation of actions. Thus, along the framework of the People’s Participation Law, the Tiquipaya municipality is compelled to have a plan for the territorial organization. This plan should solve the problems about land use and occupation of space based on a strategic, visionary planning flexible enough to interpret what is going on in the zone. Likewise, it may be also important for some academic groups, linked to the habitat problem, to reflect on their work like Alberto Rivera and Guillermo Bazoberry, the Architects College, the municipality of Cochabamba, HABITAT, CEPLAG and other institutions that are promoting ideas about a “City Statute” seated in ethical principles and moral norms.<sup>11</sup>

The land market environment has been characterized by the offer and commercialization of small. The price of land that in former years had a tendency to increase (Lizarraga, 2001), on the contrary, in this period has a tendency to decrease. Despite the decreases in the price of land it continues to be inaccessible for large sectors of the population. For example, the plots of Tiquipaya, especially those situated in agricultural zones like *Kanarancho*, *Chiquicollo*, *Rumi Mayu*, *Santiaguilla* and the southern sector of *Linde*, independently of whether they have the main basic services or not, probably have the highest prices in the department of Cochabamba although slightly inferior to the price of urban areas of the provinces that are placed in the axe *Quillacollo-Cochabamba-Sacaba*.

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<sup>11</sup> Draft document restricted to participants of a work group at CEPLAG of Economics Faculty of UMSS, April 2006

It is not possible to find a balanced point in the relationship between offer and demand of land because it was difficult to determine how many of the offered plots were effectively sold. The reason for this, was that there were different sources for these two market characteristics (newspaper ads for the offer and transference minutes of the Rural Urban Cadaster of Tiquipaya municipality for the demand)

However, by the high number of plots offered and sales registered, the land market in Tiquipaya was probably one of the most dynamic of the region. Because of its closeness with the city of Cochabamba and its physiographic and environmental characteristics, this place was attractive especially for high class people wishing to live away from the intense pace generated by the activities in large cities. These peculiarities in turn have rebounded in the high valuation of the prices of land. The owners were tempted to sell it adopting frequently the criteria of fractioning their land as a strategy to obtain more profit.

Within this dynamic, it stood out the offer and trade of land in the sectors allowed for urbanization whose prices were slightly inferior to the prices of plots placed in agricultural zones. In this sense, it may be concluded that the price is one factor, with several others, that determines and explains the current occupation of the territory.

Finally, it should be highlighted that the land market in Tiquipaya, like in the rest of the country, has slips of illegality due to evasion of taxes by land transfer. It was verified from the files of the Office of Urban and Rural Cadaster of Tiquipaya municipality the existence of a high number of minutes in which the price written down does not correspond to the real price of the transaction. It is obvious that this issue is difficult to deal with because political and private interests threat the solution.

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