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*D.3 SURVEY TO SOLID WASTE  
RECYCLERS*

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 1)**

**1. General Data**

1.1	Company Name	Erwing Ivan Luengo Gomez	
1.2	RUT	8.511.245-7	
1.3	Address	1) Present Maria del Pilar 249 (Recoleta)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	\$ 960,000	

**2. Information on Interviewee**

2.1	Name	Erwing Ivan Luengo Gomez
2.2	Title or Position	Individual Collector
2.3	Telephone	
2.4	Fax	

### 3. Activities

#### 3a. For Collectors and Middlemen

3.1	Year of Operation	15 years
3.2	Type and Number of Equipment Owned	- 1 tricycle - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: 4. Others: ✓ (waste found on the street)
3.5	Recycled Materials	paper, cardboard, glass, other objects
3.6	Average Amount of Waste Recycled	2 tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	The prices for these materials have not been very good in the last two years. These trend seems to have improved in the last two months.
3.7	Final User (to whom recycled material is sold)	The recycled material is sold at a warehouse located on Salto with Americo Vespucio. The individual objects are sold in a flee market.

**3b. For Final User**

3.1 Year of Operation	
3.2 Recycled Materials	
3.3 Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. Factories: 4. Others (specify):
3.4 Average Amount of Waste Recycled	Ton/month
3.5 Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Mr. Luengo works alone . His collection area is the municipality of Vitacura.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 2)**

**1. General Data**

1.1	Company Name	Leonardo Andres Vasquez	
1.2	RUT		
1.3	Address	1) Present  Pasaje Guerrillero 5871 (Huechuraba)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	2.4 Million \$	

**2. Information on Interviewee**

2.1	Name	Leonardo Andres Vasquez
2.2	Title or Position	Individual Collector
2.3	Telephone	
2.4	Fax	

**3. Activities**

**3a. For Collectors and Middlemen**

3.1	Year of Operation	12 years
3.2	Type and Number of Equipment Owned	- 1 tricycle - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: 4. Others (specify): <input checked="" type="checkbox"/> (waste found on the street)
3.5	Recycled Materials	paper, cardboard, glass, plastic bottles, other objects
3.6	Average Amount of Waste Recycled	2 Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	The business has been slow for the last two years. Recently, it seems to be improving.
3.7	Final User (to whom recycled material is sold)	The recycled materials are sold to a warehouse located at Americo Vespuccio with Salto streets. The other objects are taken to a flea market at calle Jorge Inostrosa (Feria Ancha). Pastic bottles are sold to a bottle shop.

**3b. For Final User**

3.1	Year of Operation	
3.2	Recycled Materials	
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. Factories: 4. Others (specify):
3.4	Average Amount of Waste Recycled	Ton/month
3.5	Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

*(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)*

Mr. Vasquez works along with his family (father, mother, brother and sister) and his collection area is the municipality of Vitacura.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 3)**

**1. General Data**

1.1	Company Name	Carlos Enrique Vasquez Lopez	
1.2	RUT		
1.3	Address	1) Present  Pasaje Guerrillero 5871 (Huechuraba)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	1.2 Million \$	

**2. Information on Interviewee**

2.1	Name	Carlos Enrique Vasquez Lopez
2.2	Title or Position	Individual Collector
2.3	Telephone	
2.4	Fax	



**3. Activities**

**3a. For Collectors and Middlemen**

3.1 Year of Operation	12 years
3.2 Type and Number of Equipment Owned	- 1 wheel cart - -
3.3 Other Main Equipment and Facility	
3.4 Main Sources of Recyclable Materials	<ol style="list-style-type: none"> <li>1. Households:</li> <li>2. Commercial Shops:</li> <li>3. Factories:</li> <li>4. Others (specify): ✓ (waste found on the street)</li> </ol>
3.5 Recycled Materials	paper, cardboard, glass bottles, plastic bottles, other objects
3.6 Average Amount of Waste Recycled	1 Tone/month
3.7 Business Trend (changes in recycled materials from 2 years ago)	The prices of recycled materials have been very low in recent years. Lately, however, they have experienced a slight increase.
3.7 Final User (to whom recycled material is sold)	The recycled materials are sold to a warehouse located on Salto with Americo Vespuccio, while the individual objects that may be found are taken to a flee market. Plastic bottles are sold to bottle stores.

**3b. For Final User**

3.1	Year of Operation	
3.2	Recycled Materials	
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. Factories: 4. Others (specify):
3.4	Average Amount of Waste Recycled	Ton/month
3.5	Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**  
(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

(No further comments)

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 4)**

**1. General Data**

1.1	Company Name	Gustavo Mena Barrales	
1.2	RUT	10.193.249-4	
1.3	Address	1) Present  Pasaje 78, casa 1440 La Faena (Peñalolen)	2) Future (if applies)
1.4	Share Capital	Million\$ / MillionUS\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	1.92 Million \$	

**2. Information on Interviewee**

2.1	Name	Gustavo Mena Barrales
2.2	Title or Position	Individual Collector
2.3	Telephone	
2.4	Fax	

### 3. Activities

#### 3a. For Collectors and Middlemen

3.1	Year of Operation	10 years
3.2	Type and Number of Equipment Owned	- 1 tricycle - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: 4. Others (specify): ✓ (waste found on the streets)
3.5	Recycled Materials	paper, cardboard, glass, other objects.
3.6	Average Amount of Waste Recycled	4.2 Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	The slowdown experienced in the last two years is slowly overcome. Prices for recyclable materials are getting better.
3.7	Final User (to whom recycled material is sold)	Recyclable materials are sold at a warehouse located in Jose Arrieta. The individual objects that may be found are sold at different flea markets.

**3b. For Final User**

3.1	Year of Operation	
3.2	Recycled Materials	
3.3	Main Sources of Recyclable Materials	<ol style="list-style-type: none"> <li>1. Individual Collectors:</li> <li>2. Middlemen:</li> <li>3. Factories:</li> <li>4. Others (specify):</li> </ol>
3.4	Average Amount of Waste Recycled	Ton/month
3.5	Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Mr. Mena used to operate with a wheel cart, but has been able to buy himself a tricycle as a result of the recent improve in the price of recyclable materials. His collection area is La Reina.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 5)**

**1. General Data**

1.1	Company Name	Juan Antonio Carrillos Antivil	
1.2	RUT	5.861.380-6	
1.3	Address	1) Present  Pasaje El Dorado 2218 (Peñalolén)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	\$ 720,000	

**2. Information on Interviewee**

2.1	Name	Juan Antonio Carrillos Antivil
2.2	Title or Position	Individual Collector
2.3	Telephone	
2.4	Fax	

**3. Activities**

**3a. For Collectors and Middlemen**

3.1	Year of Operation	9 years
3.2	Type and Number of Equipment Owned	-
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: 4. <b>Others (specify):</b> ✓ (waste found on the street)
3.5	Recycled Materials	paper, cardboard, glass, other objects
3.6	Average Amount of Waste Recycled	5 Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	The business has not suffered major alterations during the last few years.
3.7	Final User (to whom recycled material is sold)	The waste collected is sold at calle El Valle.

**3b. For Final User**

3.1	Year of Operation	
3.2	Recycled Materials	
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. Factories: 4. Others (specify):
3.4	Average Amount of Waste Recycled	Ton/month
3.5	Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

This is not the only job for Mr. Carrillos. He also dedicates to gardening and various repair works.



**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 6)**

**1. General Data**

1.1	Company Name	Hector Montenegro Novoa	
1.2	RUT	10.629.628-6	
1.3	Address	1) Present Calle 1, casa 6090 Huechuraba	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	1.7 Million \$	

**2. Information on Interviewee**

2.1	Name	Hector Montenegro Novoa
2.2	Title or Position	Individual Collector
2.3	Telephone	
2.4	Fax	

**3. Activities**

**3a. For Collectors and Middlemen**

3.1	Year of Operation	5 years
3.2	Type and Number of Equipment Owned	- 1 tricycle - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: 4. Others (specify): ✓ (waste found on the street)
3.5	Recycled Materials	paper, cardboard, glass, other objects
3.6	Average Amount of Waste Recycled	1.6 Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	The work has remained steady for the last few years.
3.7	Final User (to whom recycled material is sold)	Recyclable materials are sold at the warehouse of Americo Vespucio with El Salto, while the other objects are taken to a flea market.

**3b. For Final User**

3.1 Year of Operation	
3.2 Recycled Materials	
3.3 Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. Factories: 4. Others (specify):
3.4 Average Amount of Waste Recycled	Ton/month
3.5 Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**  
 (The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Mr. Montenegro works alone at the area of La Reina.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 7)**

**1. General Data**

1.1	Company Name	Toribio Antinan Cayupi	
1.2	RUT	40.795.007-k	
1.3	Address	1) Present  Los Pinos 3793 (Macul)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	1.2 Million \$	

**2. Information on Interviewee**

2.1	Name	Toribio Antinan Cayupi
2.2	Title or Position	Individual Collector
2.3	Telephone	
2.4	Fax	

**3. Activities**

**3a. For Collectors and Middlemen**

3.1	Year of Operation	12 years
3.2	Type and Number of Equipment Owned	- 1 tricycle - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: 4. Others (specify): ✓ (waste found on the street)
3.5	Recycled Materials	paper, cardboard, glass, other objects
3.6	Average Amount of Waste Recycled	2 Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	The last two years business has been slow, but it has improved in the last two years.
3.7	Final User (to whom recycled material is sold)	Recycled materials are sold at a warehouse located at Lo Plaza with Los Olmos. The other objects are taken to flea markets.

**3b. For Final User**

3.1	Year of Operation	
3.2	Recycled Materials	
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. Factories: 4. Others (specify):
3.4	Average Amount of Waste Recycled	Ton/month
3.5	Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

It is difficult to improve economic status by means of this activity. Mr. Antinan works at Vitacura.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 8 )**

**1. General Data**

1.1	Company Name	Mario Salas Rodriguez	
1.2	RUT	5.272.367-1	
1.3	Address	1) Present  Pasaje Penco 6086 (Peñalolen)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	\$ 960,000	

**2. Information on Interviewee**

2.1	Name	Mario Salinas Rodriguez
2.2	Title or Position	Individual collector
2.3	Telephone	
2.4	Fax	

### 3. Activities

#### 3a. For Collectors and Middlemen

3.1	Year of Operation	11 years
3.2	Type and Number of Equipment Owned	- 1 tricycle - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: 4. Others (specify): ✓ (waste found on the street)
3.5	Recycled Materials	paper, cardboard, glass, other objects
3.6	Average Amount of Waste Recycled	1 Tone/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	The business has been terrible for the last two years.
3.7	Final User (to whom recycled material is sold)	Recovered paper and cardboard is sold to SOREPA (the paper recovery company subsidiary to CMPC)



**3b. For Final User**

3.1 Year of Operation	
3.2 Recycled Materials	
3.3 Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. Factories: 4. Others (specify):
3.4 Average Amount of Waste Recycled	Ton/month
3.5 Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

The tricycle was acquired on credit in is still partly owed. All his family, including 4 children and 2 grandchildren, live off the Mr. Salinas.  
 The collection area is Vitacura.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 9)**

**1. General Data**

1.1	Company Name	Carlos Encalada Travol	
1.2	RUT	6.634.421-5	
1.3	Address	1) Present Maria Ignacia 956 (Pudahuel)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	\$ 480,000	

**2. Information on Interviewee**

2.1	Name	Carlos Encalada Travol
2.2	Title or Position	Individual collector
2.3	Telephone	
2.4	Fax	

### 3. Activities

#### 3a. For Collectors and Middlemen

3.1	Year of Operation	12 years
3.2	Type and Number of Equipment Owned	- 1 bag holding aprox. 40kg - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: 4. Others (specify): ✓ (waste found on the street)
3.5	Recycled Materials	reusable objects
3.6	Average Amount of Waste Recycled	0.8 Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	This activity has undergone a very bad crises for the last two years.
3.7	Final User (to whom recycled material is sold)	The recovered objects are taken to different free markets.

**3b. For Final User**

3.1 Year of Operation	
3.2 Recycled Materials	
3.3 Main Sources of Recyclable Materials	<ol style="list-style-type: none"> <li>1. Individual Collectors:</li> <li>2. Middlemen:</li> <li>3. Factories:</li> <li>4. Others (specify):</li> </ol>
3.4 Average Amount of Waste Recycled	Ton/month
3.5 Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Mr. Encalada must undertake other activities in order to support his family, such as gardening and repairing. His collection area is Vitacura.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 10)**

**1. General Data**

1.1	Company Name	Eno Humberto Frias Contreras	
1.2	RUT	7.412.726-6	
1.3	Address	1) Present  Poblacion Jaime Eizaguirre Pasaje 6, casa 2237 (Macul)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total:	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	1.32 Million \$	

**2. Information on Interviewee**

2.1	Name	Eno Humberto Frias Contreras
2.2	Title or Position	Individual collector
2.3	Telephone	
2.4	Fax	

### 3. Activities

#### 3a. For Collectors and Middlemen

3.1	Year of Operation	3 months
3.2	Type and Number of Equipment Owned	- 1 tricycle - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: 4. Others (specify): ✓ (waste found on the street)
3.5	Recycled Materials	paper, cardboard, glass, other objects
3.6	Average Amount of Waste Recycled	1 Tone/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	This collector is new in the field
3.7	Final User (to whom recycled material is sold)	The waste collected is sold to SOREPA, located at Ramon Cruz.

**3b. For Final User**

3.1	Year of Operation	
3.2	Recycled Materials	
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. Factories: 4. Others (specify):
3.4	Average Amount of Waste Recycled	Ton/month
3.5	Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

The most profitable part are the objects collected. The collection area is Vitacura.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 11)**

**1. General Data**

1.1	Company Name	MARTA LOPEZ	
1.2	RUT		
1.3	Address	1) Present  Nueva Andres Bello 3635 (Quinta Normal)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total: 20	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	Marta Lopez
2.2	Title or Position	family head and lot owner
2.3	Telephone	
2.4	Fax	



3. Activities

3a. For Collectors and Middlemen

3.1	Year of Operation	1984
3.2	Type and Number of Equipment Owned	- - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: ✓ 4. Others (specify): ✓ (informal collectors)
3.5	Recycled Materials	cans, paper, cardboard, plastic.
3.6	Average Amount of Waste Recycled	Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	There is a cyclical trend for plastic, which is in greater demand during the summer because of its use in making irrigation pipes. In the winter, however, it is cardboard that provides the greatest share of demand and income.
3.7	Final User (to whom recycled material is sold)	All the paper and cardboard is supplied to Recuperadora Carrascal (also sampled in this survey). The other materials are also sold to factories.

**3b. For Final User**

3.1 Year of Operation	
3.2 Recycled Materials	
3.3 Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. Factories: 4. Others (specify):
3.4 Average Amount of Waste Recycled	Ton/month
3.5 Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Marta Lopez owns a small lot (1,000 m<sup>2</sup>) in which she lives with most of her family. The lot is also used for recycling activities as middlemen. They obtain the recyclable materials from informal collectors (activity in which they also engage to a small degree) and from factories. These materials are then separated, selected and put into bales before they are sold. Approximately 20 people, all family members, participate in the business.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 12)**

**1. General Data**

1.1	Company Name	RECUPERADORA CARRASCAL	
1.2	RUT	6.694.644-4	
1.3	Address	1) Present  Av. Carrascal 5080 (Quinta Normal)	2) Future (if applies)
1.4	Share Capital	100 Million\$	
1.5	Year of Establishment	1984	
1.6	Number of Employees	1) Total: 20	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	600 Million \$	

**2. Information on Interviewee**

2.1	Name	Diego Riveros
2.2	Title or Position	Owner/Manager
2.3	Telephone	773 46 28
2.4	Fax	773 46 28

**3. Activities**

**3a. For Collectors and Middlemen**

3.1	Year of Operation	1984
3.2	Type and Number of Equipment Owned	- 5 trucks - 1 forklift - -
3.3	Other Main Equipment and Facility	2 warehouses, 4 baling machines
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: ✓ 3. Factories: ✓ 4. Others (specify): ✓ (individual collectors, middlemen)
3.5	Recycled Materials	paper and cardboard (50%-50%)
3.6	Average Amount of Waste Recycled	1,200 Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	The price of cellulose sets the profitability of the market. However, the price rarely soars below a given level, but it might always reach record highs (the price was never so good as it is this year).
3.7	Final User (to whom recycled material is sold)	Carrascal sells on a regular basis to all the paper and cardboard manufacturers of Santiago, except to CMPC (the main one), with whom only occasional deals are closed.

**3b. For Final User**

3.1 Year of Operation	
3.2 Recycled Materials	
3.3 Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. Factories: 4. Others (specify):
3.4 Average Amount of Waste Recycled	Ton/month
3.5 Business Trend (changes in recycled materials from 2 years ago)	

4. **Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

The paper and cardboard recycling business is characterized by the near monopolistic dominance of CMPC, a manufacturer with its own subsidiary paper and cardboard suppliers (such as SOREPA, sampled for the Industrial Survey). In front of this the rest of companies involved are necessarily small and highly dependent on the behavior of CMPC.

Carrascal acts as a middleman, obtaining its supply from shops, offices, factories, middlemen and individual collectors (the price paid to each of these suppliers is basically the same). Selection is then carried out at the warehouses, from where the bales are transported to the final users.

One of Carrascal's strategies for ensuring its own supply is to allocate permanent staff at supermarkets and printing shops, where they collect the recyclable material and ship it in bales directly to the customer.

Carrascal exports some of the material to Peru, Ecuador, Argentina and, maybe in the near future, Brasil. Whenever, the local supply is not enough to meet demand, the company also imports paper and cardboard from Argentina.

According to Mr. Riveros, the municipalities should be more directly involved in promoting recycling because it is in their own interest to reduce the amount for disposal.

A recyclers association should be created for each recyclable material in order to coordinate and promote the activities. In the case of paper and cardboard, an attempt was made in the past. Mr. Ortega explains that its failure was due to the fact that the people involved in this sector are of low income level.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 13)**

**1. General Data**

1.1	Company Name	ECOBAS	
1.2	RUT	96.665.640-9	
1.3	Address	1) Present  Av. Ossa 2259 (La Reina)	2) Future (if applies)
1.4	Share Capital	200 Million\$	
1.5	Year of Establishment	1993	
1.6	Number of Employees	1) Total: 15	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	180 Million \$	

**2. Information on Interviewee**

2.1	Name	Andres Astorga
2.2	Title or Position	General Manager/Associate
2.3	Telephone	277 05 74
2.4	Fax	277 05 74

### 3. Activities

#### 3a. For Collectors and Middlemen

3.1	Year of Operation	1993
3.2	Type and Number of Equipment Owned	- 3 vans - 3 trucks (over 6 tones capacity; these trucks are not owned but rented) - 70 containers
3.3	Other Main Equipment and Facility	- 1 collection and storage yard - 1 administrative building
3.4	Main Sources of Recyclable Materials	1. Households: ✓ 2. Commercial Shops: 3. Factories: ✓ 4. Others (specify):
3.5	Recycled Materials	glass, plastic, paper and cardboard, cans
3.6	Average Amount of Waste Recycled	70 ton/month from households (incl. 1-3 % non recyclable) 45 ton/month from factories
3.7	Business Trend (changes in recycled materials from 2 years ago)	The main difference is that people are getting slowly educated and the market is becoming more organized. There has not been a significant change in the types of recyclable materials.
3.7	Final User (to whom recycled material is sold)	Exclusively factories. There is some degree of exporting activity.



**3b. For Final User**

3.1	Year of Operation	
3.2	Recycled Materials	
3.3	Main Sources of Recyclable Materials	<p>1. Individual Collectors:</p> <p>2. Middlemen:</p> <p>3. Factories:</p> <p>4. Others (specify):</p>
3.4	Average Amount of Waste Recycled	Ton/month
3.5	Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Ecobas is operating the first municipal recycling campaign of Santiago, specifically in the comuna of La Reina. The company has 70 collection containers distributed among the streets where people can dispose their glass and plastic containers. Furthermore, several individual collectors (working in a free lance manner) go around collecting other recyclable materials from 9,000 households in La Reina.

The other source of recyclable materials (mainly for plastic) are the industries. Ecobas sends its own hired trucks to make the collection from the industries, which receive payment for all the materials submitted.

All materials collected are gathered in the collection and storage yard. Upon the reception of significant volumes, some of them are sold directly to factories, while others are sent outside the premises to be processed (Ecobas does not directly engage in any processing) in order to increase their value as raw material. Afterwards, these are returned to Ecobas and are sold to industries at the new value added price.

Ecobas is actively engaged in education campaigns at municipal level, which considers the key for making the business sustainably profitable.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 14)**

**1. General Data**

1.1	Company Name	Luis Soto Montecinos	
1.2	RUT	11.258.519-2	
1.3	Address	1) Present  Guillermo Mann 1042 (Ñuñoa)	2) Future (if applies)
1.4	Share Capital	5 Million\$	
1.5	Year of Establishment	1980	
1.6	Number of Employees	1) Total: 4	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	13 Million \$	

**2. Information on Interviewee**

2.1	Name	Luis Soto Montecinos
2.2	Title or Position	Owner
2.3	Telephone	
2.4	Fax	

### 3. Activities

#### 3a. For Collectors and Middlemen

3.1	Year of Operation	1980
3.2	Type and Number of Equipment Owned	- 1 scale - 1 small truck - 2 vans
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: ✓ 3. Factories: 4. Others (specify): ✓ (individual collectors)
3.5	Recycled Materials	paper and cardboard
3.6	Average Amount of Waste Recycled	2 Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	
3.7	Final User (to whom recycled material is sold)	To SOREPA (paper recovery company)

**3b. For Final User**

3.1	Year of Operation	
3.2	Recycled Materials	
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. Factories: 4. Others (specify):
3.4	Average Amount of Waste Recycled	Ton/month
3.5	Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Mr. Soto is a private middlemen whose supply comes from individual collectors and small commercial shops. His buy and sell business has a profit margin of 100%.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 15)**

**1. General Data**

1.1	Company Name	Claudio Flores Sanhueza	
1.2	RUT	9.979.925-0	
1.3	Address	1) Present  Guillermo Mann 946 (Ñuñoa)	2) Future (if applies)
1.4	Share Capital	1.5 Million\$	
1.5	Year of Establishment	1991	
1.6	Number of Employees	1) Total: 3	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	72 Million \$	

**2. Information on Interviewee**

2.1	Name	Claudio Flores Sanhueza
2.2	Title or Position	owner
2.3	Telephone	
2.4	Fax	

### 3. Activities

#### 3a. For Collectors and Middlemen

3.1	Year of Operation	1991
3.2	Type and Number of Equipment Owned	- 1 mill - 1 agglomerating unit - 1 strainer
3.3	Other Main Equipment and Facility	- 1 van
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. <b>Factories: ✓</b> 4. <b>Others (specify): ✓ (individual collectors)</b>
3.5	Recycled Materials	plastic
3.6	Average Amount of Waste Recycled	8 Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	
3.7	Final User (to whom recycled material is sold)	As a small middleman, Mr. Flores sells to larger middlemen that can gather larger quantities.

**3b. For Final User**

3.1	Year of Operation	
3.2	Recycled Materials	
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. Factories: 4. Others (specify):
3.4	Average Amount of Waste Recycled	Ton/month
3.5	Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Competition has increased considerably in the last few years. The sector is profitable enough for people of low social status so they have entered the market, reducing profit margins.



**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 16)**

**1. General Data**

1.1	Company Name	CARLOS BESOAIN	
1.2	RUT		
1.3	Address	1) Present Av. Brasil 6225 (Renca)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment	1984	
1.6	Number of Employees	1) Total: 3	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	Veronica Martinez
2.2	Title or Position	Assisant Manager (wife of Mr. Besoain)
2.3	Telephone	642 45 84
2.4	Fax	



3b. For Final User

3.1	Year of Operation	1984
3.2	Recycled Materials	drums
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. <b>Factories: ✓</b> 4. Others (specify):
3.4	Average Amount of Waste Recycled	250 drums/week
3.5	Business Trend (changes in recycled materials from 2 years ago)	

4. Other Comments

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

This is a family business in which Mr. Besoain and his wife engaged 10 years ago. They transform industrial drums (of non hazardous origin) into checkered plates for different uses. The process fee is presently \$800/drum.

Although they only work upon demand from the factories, these do not always provide the drums and so they must buy from informal collectors.

They have just the necessary machinery for surfacing and grooving the drums.

They also rent their yard to some industries as a storage site for drums.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 17)**

**1. General Data**

1.1	Company Name	CRISTALERIAS DE CHILE S.A.	
1.2	RUT	90.331.000-6	
1.3	Address	1) Present  Hendaya 60, piso 2 (Las Condes)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment	1905	
1.6	Number of Employees	1) Total: 800	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	Monica Marin Rodriguez
2.2	Title or Position	Supervisor of Recycling Unit
2.3	Telephone	246 88 80
2.4	Fax	

**3. Activities**

**3a. For Collectors and Middlemen**

3.1	Year of Operation	
3.2	Type and Number of Equipment Owned	- - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: 4. Others (specify):
3.5	Recycled Materials	
3.6	Average Amount of Waste Recycled	Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	
3.7	Final User (to whom recycled material is sold)	

**3b. For Final User**

<b>3.1</b>	<b>Year of Operation</b>	1905
<b>3.2</b>	<b>Recycled Materials</b>	glass containers
<b>3.3</b>	<b>Main Sources of Recyclable Materials</b>	<b>1. Individual Collectors:</b> <b>2. Middlemen:</b> ✓ <b>3. Factories:</b> ✓ 70% (those using glass containers) <b>4. Others (specify):</b> ✓ (own production process and supermarkets; see "Other Comments")
<b>3.4</b>	<b>Average Amount of Waste Recycled</b>	3,500 Ton/month (35-40% of total production)
<b>3.5</b>	<b>Business Trend (changes in recycled materials from 2 years ago)</b>	

4. **Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Cristalerias Chile has an 80% market share in the manufacturing of glass containers.

The activity of recycling has been carried out since the company was founded in 1905. However, a special department was created within the company in 1993 for promoting and managing everything related to recycling. Such event was directly related to the implementation of a profound technological renovation.

As mentioned before, 70% of the recyclable material is obtained from the company's clients, that is, from the factories using glass containers. The rest comes from middlemen, from its own production process and from a recycling campaign (the profits of which are destined to help rural children) where people are invited to dispose their glass containers in drums specially installed in all supermarkets. (This campaign is carried out along with the transporter Multiaseo, also sampled in this survey).

During the nine months of implementing the campaign, the conscience level of customers has increased considerably. At first, the some drums would contain 50% of common waste. Presently, almost all the content corresponds to glass containers.

Next are some facts that hinder glass recycling:

- . Low consumption rate of glass containers
- . Large amounts of glass containers exported (especially for wine)
- . Large amounts of reused glass containers (especially for pisco and wine) without recycling.

According to the interviewee, there is a need for a strong governmental campaign that promotes recycling and, specifically, the use of glass as an environmentally conscious container. The political involvement is judged to be extremely passive.

The present buying price for the company is between \$18 and \$21/kg, depending on the type of glass.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 18)**

**1. General Data**

1.1	Company Name	SIDERURGICA AZA	
1.2	RUT	92.176.000-0	
1.3	Address	1) Present La Union 3070 (Renca)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment	1955	
1.6	Number of Employees	1) Total: 290	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	Carlos Ferrer
2.2	Title or Position	Plant Engineer
2.3	Telephone	641 86 83
2.4	Fax	





**3b. For Final User**

3.1	Year of Operation	1960 (since installation of electrical furnace)
3.2	Recycled Materials	scrap
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: ✓ 3. Factories: 4. Others (specify):
3.4	Average Amount of Waste Recycled	70,000 Ton/year
3.5	Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Siderurgica Aza is a common steel manufacturer for structural purposes. About 100 middlemen (10 of which account for most of the amount) supply the company with the necessary scrap that is reutilized in its industrial process.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 19)**

**1. General Data**

1.1	Company Name	TEXTIL PLOS LTDA.	
1.2	RUT	80.750.600-5	
1.3	Address	1) Present Av. Buzeta 4027 (Cerrillos)	2) Future (if applies)
1.4	Share Capital	not provided	
1.5	Year of Establishment	1958	
1.6	Number of Employees	1) Total: 150	Operation: ( %)
			Administration: ( %)
			Other: ( %)
1.7	Annual Sales	not provided	

**2. Information on Interviewee**

2.1	Name	Javier Plos
2.2	Title or Position	Manager
2.3	Telephone	683 31 23
2.4	Fax	

**3. Activities**

**3a. For Collectors and Middlemen**

3.1 Year of Operation	
3.2 Type and Number of Equipment Owned	- - - - - -
3.3 Other Main Equipment and Facility	
3.4 Main Sources of Recyclable Materials	<ol style="list-style-type: none"> <li>1. Households:</li> <li>2. Commercial Shops:</li> <li>3. Factories:</li> <li>4. Others (specify):</li> </ol>
3.5 Recycled Materials	
3.6 Average Amount of Waste Recycled	Tones/month
3.7 Business Trend (changes in recycled materials from 2 years ago)	
3.7 Final User (to whom recycled material is sold)	

**3b. For Final User**

3.1	Year of Operation	1958
3.2	Recycled Materials	textiles (wool, acrylics, polyester)
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. Factories: ✓ (sewing factories, spinning mills) 4. Others (specify):
3.4	Average Amount of Waste Recycled	20 Ton/month (100% of input material)
3.5	Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Textil Plos is a manufacturer of carpets, blankets and other textile products. The company obtains all its input material from sewing factories and spinning mills. Any textile residue generated in these factories is reutilized at Plos. Textile residues from Plos' own production process is also reutilized. The average material is recycled 4 or 5 times into the production process. The total production of Plus can be divided in the following manner:

95% final product

5% raw material for other textile factories

According to Mr. Plos, the supply of recyclable materials is stable and allows for almost perfect substitutes in case of unexpected price increases of one specific product (e.g. if the price of wool stays high, another textile product can be utilized until the market regulates itself). According to him there is no need for an association of textile recyclers as it is a very stable and self regulated market free of environmental hazard.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 20)**

**1. General Data**

1.1	Company Name	INDUSAC S.A.	
1.2	RUT	95.051.000-5	
1.3	Address	1) Present  Benardo O'Higgins 0252 (Puente Alto)	2) Future (if applies)
1.4	Share Capital	1,000 Million\$	
1.5	Year of Establishment	1982	
1.6	Number of Employees	1) Total: 160	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	2,500 Million \$	

**2. Information on Interviewee**

2.1	Name	Andres Poniachik
2.2	Title or Position	General Manager
2.3	Telephone	850 05 23
2.4	Fax	850 14 48

**3. Activities**

**3a. For Collectors and Middlemen**

3.1	Year of Operation	
3.2	Type and Number of Equipment Owned	- - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: 4. Others (specify):
3.5	Recycled Materials	
3.6	Average Amount of Waste Recycled	Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	
3.7	Final User (to whom recycled material is sold)	



**3b. For Final User**

3.1	Year of Operation	1982
3.2	Recycled Materials	plastic
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: 3. <b>Factories: ✓</b> 4. Others (specify):
3.4	Average Amount of Waste Recycled	200 Tones/month
3.5	Business Trend (changes in recycled materials from 2 years ago)	Regarding plastic recycling, in the last few years the trend has pointed towards an increase in the amount of recycled plastic.

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Indusac obtains recyclable plastic from factories in order to produce both its own final products (toys, household objects) and plastic raw material for other industries. Both lines of products share an equal 50% of the total production.

Two years ago, the company made an agreement with some municipalities and schools in order to obtain recyclable plastic. Although the quantity generated would be enough supply for Indusac, the project failed due to lack of organization.

An association of plastic recyclers would be very helpful to promote the activity. The government, however, should also contribute by subsidizing those products made with recycled plastic, as it is done in other countries (e.g. United States).

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 21 )**

**1. General Data**

1.1	Company Name	CRISTALERIAS TORO S.A.I.C.	
1.2	RUT	93.372.000-4	
1.3	Address	1) Present Dagoberto Godoy 145 (Cerrillos)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment	1952	
1.6	Number of Employees	1) Total: 250	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	12 Million US\$	

**2. Information on Interviewee**

2.1	Name	Pedro Toro Harnecker
2.2	Title or Position	Operation Manager
2.3	Telephone	683 39 71
2.4	Fax	683 25 39

**3. Activities**

**3a. For Collectors and Middlemen**

3.1	Year of Operation	
3.2	Type and Number of Equipment Owned	- - - - - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	<ol style="list-style-type: none"> <li>1. Households:</li> <li>2. Commercial Shops:</li> <li>3. Factories:</li> <li>4. Others (specify):</li> </ol>
3.5	Recycled Materials	
3.6	Average Amount of Waste Recycled	Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	
3.7	Final User (to whom recycled material is sold)	

**3b. For Final User**

3.1	Year of Operation	1952
3.2	Recycled Materials	glass
3.3	Main Sources of Recyclable Materials	<ol style="list-style-type: none"> <li>1. Individual Collectors:</li> <li>2. Middlemen:</li> <li>3. Factories: ✓ (mainly bottling plants)</li> <li>4. Others (specify):</li> </ol>
3.4	Average Amount of Waste Recycled	900-1,000 Tones/month
3.5	Business Trend (changes in recycled materials from 2 years ago)	The supply has not grown according to the needs, therefore pushing the price of recycled glass up.

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Cristalerias Toro is presently using 50% of recycled glass into its production process. Ideally they would input 70% of recycled glass, but the existing supply cannot provide such quantity. For these reason they are very interested in the promotion of recycling, and they are willing to work along with the government bodies. They have started a small scale study to evaluate new sources of recyclable materials, information which they could share with the authorities.

The glass presently obtained is mixed in colours and quality, so that Toro must employ 10 persons engaged exclusively in the separation of glass (which should be done at the source).

Another reason for the lack of recyclable material is that most wine and pisco bottles are reused without recycling.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 22 )**

**1. General Data**

1.1	Company Name	INDUSTRIAS ENGAR	
1.2	RUT	815.870-3	
1.3	Address	1) Present Jose Joaquin Perez 4809 (Quinta Normal)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment	1945	
1.6	Number of Employees	1) Total: 18	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	15 Million \$	

**2. Information on Interviewee**

2.1	Name	Fernando Solis
2.2	Title or Position	Owner
2.3	Telephone	773 23 49
2.4	Fax	773 23 49

**3. Activities**

**3a. For Collectors and Middlemen**

3.1	Year of Operation	
3.2	Type and Number of Equipment Owned	- - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: 4. Others (specify):
3.5	Recycled Materials	
3.6	Average Amount of Waste Recycled	Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	
3.7	Final User (to whom recycled material is sold)	

**3b. For Final User**

3.1	Year of Operation	1945
3.2	Recycled Materials	metal drums
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: ✓ (15%) 2. Middlemen: 3. Factories: ✓ (85%) 4. Others (specify):
3.4	Average Amount of Waste Recycled	300 drums/week
3.5	Business Trend (changes in recycled materials from 2 years ago)	Two years ago, the manufacturers of drums tried to compete against recyclers by throwing a very cheap product into the market. Recently, they regularized their prices because they could not ignore their costs any longer. Recyclers continue to concentrate on small orders of drums, that is, those orders that aim at ensuring the needs and not at gathering a stock of drums.

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

The main process carried out by Engar consists in pumping air into the drums in order to knock out the dents. Drums are also washed and, sometimes, painted.

When they become unusable, they are cut open and turned into metal plates that will serve as roof for structures.

Engar keeps some of its drums on storage at the premises of Mr. Besoain, also interviewed for this survey.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 23)**

**1. General Data**

1.1	Company Name	FOSKO S.A.	
1.2	RUT	81.866.400-1	
1.3	Address	1) Present  Eduardo Matte 2071 (Santiago)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment		
1.6	Number of Employees	1) Total: 30	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	Eduardo Toro
2.2	Title or Position	Recycling Plant Manager
2.3	Telephone	551 79 63
2.4	Fax	551 79 63



**3. Activities**

**3a. For Collectors and Middlemen**

3.1	Year of Operation	
3.2	Type and Number of Equipment Owned	- - - - - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: 4. Others (specify):
3.5	Recycled Materials	
3.6	Average Amount of Waste Recycled	Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	
3.7	Final User (to whom recycled material is sold)	

**3b. For Final User**

3.1	Year of Operation	1985
3.2	Recycled Materials	plastic (polypropylene, polyethylene, polystyrene)
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: ✓ (30%) 3. Factories: ✓ (70%) 4. Others (specify):
3.4	Average Amount of Waste Recycled	185 Tones/month
3.5	Business Trend (changes in recycled materials from 2 years ago)	Regarding plastic recycling, the trend has been to increasingly use recycled material, specially since the price hike for the raw material at the end of 1993. Other than the usual seasonal cycles, the plastic industry is considered to be stable.

4. **Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Fosko's main activity is the operation of its injection plant, which uses plastic as one of the raw materials for its processes. In 1985, Fosko founded its plastic recycling plant, which is presently endowed with the following machinery:

- . 4 mills
- . 3 agglomerating units
- . 3 sluicing machines

All the recyclable material obtained from the factories (70%) is treated and returned to the source as raw material in exchange for a fee.

Fosko also obtains some of its recyclable plastic (30%) from middlemen. This plastic is actually bought and, after recycling, is: 1) sold to the industries; or 2) used at the injection plant.

The total capacity of the recycling plant amounts to 230 tones/month.

Plastic recycling activities have picked up considerable in the last few years. Two are the main reasons for this:

- 1) The price hike experienced by the raw material at the end of 1993
- 2) An environmental consciousness trend under which factories are trying to improve their image and pay further attention to reusing their plastic scrap.

At any rate, the result is a higher cost efficiency without dramatically damaging product quality.

The main difficulties for reusing plastic are these:

- 1) Color: recovered plastic cannot recover its original color, which limits its potential uses.
- 2) Quality
- 3) Treatment requirements: sometimes they do not justify the costs.

The image of plastic recyclers was seriously damaged at the end of 1993, when several small companies entered the business as a result of the increased demand. Most of them did not have the appropriate recycling technology and know-how and they provided a low quality final product.

The market continues to be small enough so as not needing a plastic recyclers association.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 24)**

**1. General Data**

1.1	Company Name	FABRICA DE CARTON BELLAVISTA Y CIA. LTDA.	
1.2	RUT	81.290.000-5	
1.3	Address	1) Present Eyzaguirre 1605 (Puente Alto)	2) Future (if applies)
1.4	Share Capital	Million\$ / Million US\$	
1.5	Year of Establishment	1960	
1.6	Number of Employees	1) Total: 46	Operation: ( %) Administration: ( %) Other: ( %)
1.7	Annual Sales	Million \$ / Million US\$	

**2. Information on Interviewee**

2.1	Name	Raul de la Barrera
2.2	Title or Position	Plant Engineer
2.3	Telephone	850 02 43
2.4	Fax	

**3. Activities**

**3a. For Collectors and Middlemen**

3.1	Year of Operation	
3.2	Type and Number of Equipment Owned	- - -
3.3	Other Main Equipment and Facility	
3.4	Main Sources of Recyclable Materials	1. Households: 2. Commercial Shops: 3. Factories: 4. Others (specify):
3.5	Recycled Materials	
3.6	Average Amount of Waste Recycled	Tones/month
3.7	Business Trend (changes in recycled materials from 2 years ago)	
3.7	Final User (to whom recycled material is sold)	

**3b. For Final User**

3.1	Year of Operation	1960
3.2	Recycled Materials	cardboard and paper
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: ✓ 3. Factories: 4. Others (specify): ✓ (office paper from banks and other)
3.4	Average Amount of Waste Recycled	170 Tones/month
3.5	Business Trend (changes in recycled materials from 2 years ago)	The declining value of the US\$ has made importing cardboard an attractive alternative.

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Bellavista is a cardboard manufacturer. All its production results from the recycling of paper and cardboard, which it obtains from commercial offices (banks, etc.) and from middlemen who, in turn, buy from individual collectors. The company follows the manifest system.

**SURVEY TO  
SOLID WASTE RECYCLERS  
(Survey # 25 )**

**1. General Data**

1.1	Company Name	PLASTISERVI LTDA.	
1.2	RUT	79.522.140-9	
1.3	Address	1) Present Sta. Rosa 3021	2) Future (if applies)
1.4	Share Capital	120 Million\$	
1.5	Year of Establishment	1985	
1.6	Number of Employees	1) Total: 40	Operation: ( %)
			Administration: ( %)
			Other: ( %)
1.7	Annual Sales	500 Million \$ (40% from recycling)	

**2. Information on Interviewee**

2.1	Name	Antonio Bermudez
2.2	Title or Position	Associate/Manager
2.3	Telephone	555 96 43
2.4	Fax	554 47 98

**3. Activities**

**3a. For Collectors and Middlemen**

3.1 Year of Operation	
3.2 Type and Number of Equipment Owned	<p>-</p> <p>-</p> <p>-</p>
3.3 Other Main Equipment and Facility	
3.4 Main Sources of Recyclable Materials	<p>1. Households:</p> <p>2. Commercial Shops:</p> <p>3. Factories:</p> <p>4. Others (specify):</p>
3.5 Recycled Materials	
3.6 Average Amount of Waste Recycled	Tones/month
3.7 Business Trend (changes in recycled materials from 2 years ago)	
3.7 Final User (to whom recycled material is sold)	



**3b. For Final User**

3.1	Year of Operation	1995
3.2	Recycled Materials	plastic (high and low density polyethylene)
3.3	Main Sources of Recyclable Materials	1. Individual Collectors: 2. Middlemen: ✓ (50%) 3. Factories: ✓ (50%) 4. Others (specify):
3.4	Average Amount of Waste Recycled	150 Tones/month
3.5	Business Trend (changes in recycled materials from 2 years ago)	

**4. Other Comments**

(The opinions expressed under this item correspond to the interviewee, and do not necessarily coincide with those of the company)

Plastiservi started its operations in 1985 as a plastic recycler. At that time the amount recycled was 500kg/day. The company evolved into a plastic bags and hoses manufacturer, turning recycling into a minor activity. In February of this year a decision was made to invest and start recycling at a large scale (up to the present 150 tones/month). At present, the largest part of production goes for sale to other plastic using industries, while the rest is inputted into the company's own processes. The distinctive advantage of Plastiservi is its entrepreneurial approach to recycling: it does not just provide a recycling service in exchange for a fee, but it buys recyclable material for which it must find a buyer. The competition, however, is still high, with several industries existing.

The main difficulty in the plastic recycling sector is to obtain quality material from suppliers. For this reason, in order to reduce the uncertainty, Servioplasti devotes one person to keep the flow from suppliers alive.



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